Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning Minister Assisting the Premier on Olympic and Paralympic Games Infrastructure **BRIEFING NOTE FOR DECISION**

SUBJECT Draft South East Queensland (SEQ) Regional Plan (*ShapingSEQ*) 2023 Update, draft South East Queensland Infrastructure Supplement (SEQIS), and consultation paper on proposed amendments to the Planning Regulation 2017 (Planning Regulation)

Note: *	This brief is considered draft until I. Approved	Signed
	Not approved Noted	Hon. Steven Miles MP, Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning Minister Assisting the Premier on Olympic and Paralympic Games Infrastructure
	Further information required (see comments)	Comments:

ACTION REQUIRED BY 31 July 2023 to achieve committed timeframes for the ShapingSEQ 2023 Update.

RECOMMENDATION

It is recommended that you:

- **note** the draft *ShapingSEQ* 2023 Update (Attachment 1)
- note the summary of the draft ShapingSEQ 2023 Update (Attachment 2) and supporting material prepared by the Department of State Development, Infrastructure, Local Government and Planning (the department) (Attachment 3 – Growth Areas Assessment, Attachment 4 – Model for Urban Land Use Transport Interaction (MULTI) Background Paper and Attachment 5 – Regional Land Use Category Changes Report)
- **decide** to propose to amend the current *ShapingSEQ* (August 2017) in the form of the draft ShapingSEQ 2023 Update under the *Planning Act 2016* (Planning Act)
- **decide** to publicly notify the draft *ShapingSEQ* 2023 Update for a period of at least 30 business days from the day after gazettal for making submissions
- **authorise** the department to publish the draft *ShapingSEQ* 2023 Update in accordance with the applicable legislative requirements

•	approve the use of your electronic signature on the attached letters to be sent post gazettal to the
	mayors of the local governments and local members of Parliament in the SEQ region (Attachment 7), advising of the public consultation, and enclosing a copy of the published Queensland Government Gazette notice

- note the draft consultation paper about the potential changes to the Planning Regulation (Attachment 8) to support implementation of the draft ShapingSEQ Update 2023
- decide to release the draft consultation paper about the potential changes to the Planning Regulation and the SEQIS (Attachment 8), for public comment, at the same time as the draft ShapingSEQ Update is published

• **note** the draft SEQIS (**Attachment 9**)

BACKGROUND

 The department has prepared a draft ShapingSEQ 2023 Update in consultation with regional stakeholders, state agencies and the SEQ Regional Planning Committee (SEQRPC).

KEY ISSUES

Public Consultation

• A draft notice has been prepared and, subject to your approval, is proposed to be published in the Queensland Government Gazette on 2 August 2023 to commence the public consultation process.

Draft SEQ Infrastructure Strategy (SEQIS)

• A targeted SEQIS that responds directly to the draft ShapingSEQ 2023 Update has been drafted and will accompany the draft regional plan update for public consultation. The SEQIS is intended to be a targeted version of the SEQ Regional Infrastructure Plan that has been fast tracked to align with the ShapingSEQ 2023 Update in response to the housing challenges.

 The draft SEQ/S (Attachment 9) outlines the necessary planning for critical regional infrastructure and the key drivers, opportunities and challenges that will inform infrastructure planning for the region for the next 20 years. The draft SEQ/S has been prepared to respond to the land-use planning priorities proposed in the draft ShapingSEQ 2023 Update.

Potential amendments to the Planning Regulation 2017

- As detailed in **Attachment 8**, the draft *ShapingSEQ* 2023 Update is supported by proposed amendments to the Planning Regulation to support delivery of the policy intent of the draft *ShapingSEQ* 2023 Update.
- The draft consultation paper about the potential changes to the Planning Regulation (**Attachment 8**) to support implementation of the draft *ShapingSEQ* Update 2023 has been prepared by the department and it is recommended be released for public comment at the same time as the draft *ShapingSEQ* Update is published.
- Following consultation on the potential changes a further brief will be progressed to you about proposed changes to the Planning Regulation.

. 73(2) - Not relevant/ Out of scope

Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning Minister Assisting the Premier on Olympic and Paralympic Games Infrastructure **BRIEFING NOTE FOR DECISION**

Approved by (A/DDG) **Director-General Endorsement** Author Approved by (Dir/Exec Dir) Name: Lauren Mudd Name: Mike Kaiser Name: Michelle Cottrell Name: Chris Aston Division: Planning Group Position: Principal Planner Position: Project Director Branch: Office of the Deputy Tel/Mob No: 3452 6822 Signed Unit: Office of the Deputy Director-General Date: 25 July 2023 Director-General Mile Kairen. Tel/Mob No: (07) 3452 7102 Tel/Mob No: (07) 3452 7723 Date: 7 July 2023 Date: 20 July 2023 Date ...27.../07...../2023..

• Note: This brief is considered draft until signed.

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High level need assessment

Regional dwelling need

The proposed inclusion of additional Urban Footprint is derived from regional level analysis which indicates:

- The need to accommodate larger households in detached dwellings
- Balancing growth across the region to provide for a desirable and achievable spread, and rate of growth
- The need to plan and accommodate required future industrial land.

Over the next 25 years, SEQ's population is expected to grow to around six million people. This will require almost one million new homes and around one million new jobs when catering for population growth and change and the needs of tourism and short-term accommodation. Population growth alone requires approximately 865,000 new homes. Demographic trends are driving the need to plan for both smaller households and attached dwellings and larger households and detached dwellings. Figure 1 and Figure 2 illustrate the household composition derived from the draft ShapingSEQ 2023 Update population projections and allocation of house type across both attached and detached dwellings.

SEQ requires an additional 345,000 detached dwellings to meet the needs for larger households while an additional 520,000 attached dwellings are required for smaller households. The response in ShapingSEQ has sought to support the delivery of this mix of housing while also considering the rate of growth and distribution across the region. Importantly SEQ is currently experiencing a period of significant housing stress, with overall housing supply and diversity not keeping up with sustained demand for new homes and changing households. The ability to realistically plan for and deliver appropriate housing across the region at the required rate has been analysed extensively as a part of the regional plan review.



Figure 1 - Dwellings by Household Type (2021 and 2046)



Figure 2 – Attached and Detached Dwellings by Household Type (2021 and 2046)

The Urban Footprint identifies land within which the region's urban development needs to 2046 can be accommodated and includes established areas and land with potential to accommodate new dwellings. The Urban Footprint is sized having regard to capacity within statutory plans (including constraints and infrastructure servicing), efficiency of infrastructure servicing, economic feasibility and future long term infrastructure planning. PFGAs which sit outside the Urban Footprint and have no statutory commitment, are identified in the *ShapingSEQ* 2017 plan as providing an indication of "potential" future land supply to meet urban growth needs.

Since 2017, the Growth Monitoring Program (GMP) has built an improved evidence base of the drivers for development supply and housing in SEQ. In particular, the GMP has supported improved planning assumptions and a sharing of data by Councils and State government agencies. Improved practice from the GMP, together with outcomes from work undertaken on the Underutilised Urban Footprint (UUF), updated planning assumptions for Priority Development Areas (PDAs) and updated local government development assumptions, has provided a more realistic understanding of capacity within the 2017 Urban Footprint. Further, the monitoring of industrial land has provided a more detailed understanding of industry land supply and requirements.

The draft *ShapingSEQ* 2023 Update has also been underpinned by a new regional integrated land use and transport modelling framework – the Model for Urban Land Use and Transport Interaction (MULTI). This utilises improved data and assumptions derived through the GMP and a rules-based model which integrates land use and transport considerations. The MULTI has informed the revised dwelling supply targets and the sizing of the Urban Footprint in the draft *ShapingSEQ* 2023 Update.

The MULTI has been applied through an iterative methodology where the business as usual / current situation (referred to as "base case") was analysed. Subsequent alternative scenarios (referred to as alternative scenario 1, alternative scenario 2 and alternative scenario 3) have been modified and tested through the application of "policy interventions" or in other words – regional planning policy. The aim has been to identify a preferred regional settlement pattern where growth is allocated and the Urban Footprint is sized giving consideration to size, speed and mix of desired residential growth. Figure 3 provides an overview of the iterative methodology and Table 1 provides a summary of "policy interventions" refined through the alternatives to deliver the preferred regional growth pattern.

Figure 3 - Modelling Methodologies



s. 73(2) - Not relevant/ Out of scope

Page 9 redacted for the following reason: s. 73(2) - Not relevant/ Out of scope The primary intent of the policy interventions applied in the alternative scenarios from a residential perspective has been to provide a balanced approach to additional supply for both attached and detached dwellings across the region to 2046 while addressing the following key components of growth management:

- Size accommodating through the Urban Footprint future households in accordance with a preferred settlement pattern
- Speed adopting realistic assumptions, based on improved knowledge about barriers to growth can we meet the required rate of housing delivery
- Mix accommodating the necessary diversity in housing types for new and changing households.

In other words, consideration has been given to not only the size of the Urban Footprint but the ability of to meet the rate and mix of dwellings from a regional perspective and then a local perspective.

The base case scenario takes account the allocation of growth to the current state of play (current statutory land use and infrastructure policy). It relies on information sourced from local governments to the extent that growth and infrastructure requirements are reflected within each local government planning scheme and local government infrastructure plan. The analysis of the base case scenario identifies there is a need for more land supply to meet dwelling and employment demand while balancing the rate of development and mix of housing supply.

Under the base case scenario, as shown in Table 2, several local government areas (LGAs), including Redlands are identified as having either limited or no remaining capacity for projected dwellings at 2046.The following key considerations can be identified:

- The Moreton Bay LGA has the lowest capacity when compared to the entire region and has one of the highest actual growth rates
- Brisbane, Redland and Sunshine Coast LGAs have no remaining capacity at 2046
- Logan and Ipswich LGAs retain extensive remaining capacity at 2046 for detached dwelling supply
- Toowoomba though its Local Growth Plan has demonstrated the need of additional greenfield residential supply to support existing communities within Highfields and Westbrook
- At an SEQ level, there is limited remaining capacity with a moderate actual growth rate identified.

The limited supply will over time impact on rate of growth due to limited development opportunities. It is recognised regional practice to ensure there are reserves of residential supply to ensure growth and the market is not unduly restricted.

Department of State Development, Infrastructure, Local Government and Planning

Table 2 -	Projected	dwellings,	remaining	capacity	and	growth	rate	analys	sis across	South	East	Queensland
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LGA	2021	Projections at 2046	Ultimate capacity from the baseline	Remaining Capacity	% of Remaining Capacity	Projected growth rate between 2021-2046	Actual growth rate/year 01-21
s. 73(2) - Not relevant/ Ou	it of scope						
Redland	65,014	84,995	82,864	-2,131	-2.5%	1.08%	1.93%
s. 73(2) - Not relevant/ Ou	It of scope						
SEQ	1,536,435	2,400,207	2,808,946	408,739	17%	1.80%	2.05%
s. 73(2) - Not relevant/ Ou	t of scope						
Alternative scer residential supp						ervention addition addition locations.	onal
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Where additional detached capacity was needed, the first set of assumptions applied through alternative scenario. modelling assumed an accelerated rate of delivery in existing committed areas. . 73(2) - Not relevant/ Out of scope

Subsequent to

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that, changes to Urban Footprint have been included where they respond to regional needs, in particular the regional growth needs and realistic assumption regarding the rate of growth and mix of housing across SEQ (note: policy intervention 6, 8 and 12 in Table 1 which result in PFGAs being included in the Urban Footprint).

PFGAs are defined as follows in the regional plan:

"The intent is to protect their future potential, not to promote or support their investigation for urban purposes during the life of ShapingSEQ, unless the Queensland Government's SEQ Growth Monitoring Program indicates adequate supply may not be provided and the benchmarks or baselines may not be accommodated in the Urban Footprint...

... The role of these areas will be considered further at the next review of ShapingSEQ."

The inclusion of the three PFGAs within the Urban Footprint with assumed commencement dates ranging from 2026 to 2041 contribute approximately 11,000 additional dwellings by 2046 of which 8,800 are assumed to be detached dwellings.

The PFGAs are considered logical extensions of the Urban Footprint that provide housing supply for growth across the region and in particular, for detached homes. The PFGAs are in locations which were shown to have limited capacity to 2046 and where demand for detached dwellings exist.

As demonstrated above, supply constraints were identified for the entire region and specifically of scope Redland LGAs. In the context of these LGAs, additional greenfield supply was assumed with increased development rate and with the addition of PFGAs.

Prior to the inclusion of PFGAs an assessment of the scope Southern Thornlands cope Southern Tho undertaken and is detailed below. These PFGAs have previously progressed through assessment as part of their identification of a PFGA, and/or have investigated by each local government for future urban purposes.

Finally, the recognition of this suite of policy interventions including additional urban footprint has resulted in the allocation of detached dwelling growth across the region outlined in Table 3.

73(2) - Not relevant/ Out of scope With the addition of Southern Thornlands, Redland will accommodate an additional 4% s. 73(2) - Not relevant/ Out of scope It is not considered that this allocation through the urban footprint changes represents an over allocation of detached dwelling growth to these LGA's.

Local Government	2021	2046	Growth 21-46	Share of Growth	
s. 73(2) - Not relevant/ Out of scope					
Redland	54,083	66,626	12,5	43	4%

Table 3 - Share of Detached Dwelling Growth (2021-2046)

Department of State Development, Infrastructure, Local Government and Planning

Local Government	2021	2046	Growth 21-46	Share of Growth
s. 73(2) - Not relevant/ Out of scope				
SEQ Total	1,058,864	1,403,707	344,843	100%

Looking beyond 2046 this region wide analysis has also resulted in the proposed addition of four new PFGAs. The areas assessed and documented are Staplyton, North Harbour, Highfields and Westbrook PFGAs. The identification of these PFGAs assist in long-term planning, effectively managing urban expansion and preventing haphazard development beyond 2046.

Regional industrial need

Analysis of industrial land supply and demand has identified challenges at the regional, sub-regional and local levels. The supply estimates are drawn from the unreleased 2022 Land Supply and Development Monitoring (LSDM) report, while demand projections are based on two alternative approaches, namely:

- Historic land take-up as reported by the LSDM
- Projected land take-up based on employment projections.

As the region grows, current projections show the future supply of industrial land in the Brisbane LGA becoming exhausted within the life of the plan – as soon as the 10–15-year horizon. Despite intensification of use of industrial areas being a key objective of industrial land planning within Brisbane LGA, there remains only a finite supply of industrial land in Brisbane. Over time, as Brisbane's industrial land is taken up, industrial land prices will rise which will cause an incremental redistribution of industrial activities with larger footprints outside of Brisbane. This will also naturally occur for freight and logistics operators who typically aim to be on the urban fringe to facilitate breaking of bulk freight prior to areas of urban congestion.

Excess demand out of Brisbane by 2046 is estimated to range from 500 hectares up to greater than 1,500 hectares. The freight and logistics network of SEQ sees its regional focus skew south and west in response to significant freight volumes originating from or being destined to the southern states. This indicates that the LGAs of Gold Coast, Ipswich and Logan are all likely to play key roles in meeting future industrial land demand diverted from Brisbane. However, it is acknowledged that this is additional demand to that which has previously been projected for these LGAs.

At the sub-regional level, an industrial land supply challenge has been identified within the northern sub-region. s. 73(2) - Not relevant/ Out of scope

At the local level, the Redland LGA is expected to have a shortage of industrial land under multiple demand scenarios. Supply and demand estimates suggest the remaining capacity of industrial land within Redland LGA was between 10 years and 28 years. However, the 28-year capacity estimate assumes industrial land take-up of only one hectare per annum. There is a high likelihood that Redland LGA would exhaust its remaining supply of industrial land within the life of ShapingSEQ (2041), and therefore within the life of the Shaping SEQ Review (2046). A 2020 study by CDM Smith (Economic Feasibility Assessment for Southern Thornlands Potential Future Growth Area) corroborates a finding that Redland LGA will exhaust its remaining supply of industrial land within the life of Shaping SEQ.

Proposed Urban Footprint inclusions

Southern Thornlands – Redland City Council

Overview / context

ShapingSEQ 2017 identifies Southern Thornlands as a PFGA and requires Redland City Council (RCC) to investigate the Southern Thornlands PFGA in the short term for potential future employment. On 23 July 2020, the former Planning Minister issued a Ministerial Direction to RCC to finalise investigations of the Southern Thornlands PFGA as required by *ShapingSEQ*. RCC has since submitted a Medium Density Residential Major Amendment to their planning scheme for state interest review to the Minister for Planning. The proposed amendment includes a concept plan for Southern Thornlands including a range of urban uses involving a Mixed Industry and Business Area, Intensive Horticulture Precinct, Education, Training and Recreation Precinct, Transport Uses Precinct, Storage and Larger Scale Home Based Enterprise Precinct and Rural Residential Precinct.

The Department of State Development, Infrastructure, Local Government and Planning (the department) has advised RCC that it does not support the Rural Residential Precinct as it conflicts with *ShapingSEQ* 2017. The proposed planning scheme amendment has been put on hold (at the first state interest review stage) pending a response to the department's request for further information from RCC.

Sch. 4(4)(4) - Disclosing deliberative processes

RCC by resolution at a general meeting held on 19 April 2023, unanimously agreed that:

- The Council does not support urban residential land uses being delivered in the Southern Thornlands PFGA, via designation as a PDA or other regulatory mechanisms
- This is to allow council's preferred land use intents to be delivered through a Major Amendment to the planning scheme
- Despite the formal position of RCC, technical officers from the council have indicated their willingness to engage with the department on matters relevant to the planning of a PDA or other regulatory mechanisms, including infrastructure servicing and housing affordability.

On 15 September 2022, the Deputy Premier notified the RCC of his decision to use his powers under section 27 of the *Planning Act 2016* to:

- Undertake a new Housing Supply and Diversity Strategy (the strategy) for the Redland LGA
- Consider what amendments are needed to the Redland City Plan 2018 (the City Plan) to facilitate any housing needs identified by the strategy.

The Growth Areas Team (GAT) within the Planning Group of the department has been developing the strategy which has involved reviewing current and future housing needs to inform amendments to the City Plan. A draft Redland Housing Supply and Diversity Strategy is being finalised and anticipated to be available for public comment in October 2023. It is addressing housing supply and diversity of housing stock to support a growing and changing population.

Previous assessment for the PFGA inclusion in ShapingSEQ 2017

A number of submissions were received for the Southern Thornlands PFGA as part of developing ShapingSEQ 2017 and were considered as part of the broader dwelling supply need (previous assessment for potential Urban Footprint inclusion at D17/33886). The following was determined as part of the previous assessment of the assessment area:

• The assessment area is constrained by class A and B agricultural land, MSES (regulated vegetation, watercourses), coastal and bushfire prone overlays

- Parts of the assessment area may be appropriate for some form of future development due to its proximity to existing services, social and transport infrastructure and employment. It could be considered as a logical expansion of the existing urban footprint and the constraints could be potentially mitigated or appropriately managed
- Upon further review it was determined that additional planning is required before the land should be included in the Urban Footprint.

The previous assessment indicated that any change in RLUC was considered to be premature at the time until further investigations have been undertaken to determine the extent of and appropriate land uses.

RCC previously supported the identification of this area as a PFGA, and has submitted a proposed planning scheme amendment relating the area, stating their intentions to undertake further planning to determine the appropriate extent of any potential future land uses.

This area was directed to be retained in the RLRPA and identified as a PFGA under *ShapingSEQ* 2017. Clear direction in the regional plan was then provided to council to undertake these investigations to inform its planning scheme by the end of 2019.

Boundary

The spatial extent of the Southern Thornlands PFGA was endorsed by RCC on 9 October 2019 during a Council General Meeting for further investigation and future scheme amendment, with the exception of minor adjustments made by the department along road reserve and waterway parcels to reflect the current cadastre. The boundary for the purposes of the draft *ShapingSEQ* 2023 Update was adjusted from the Council endorsed boundary to ensure the PFGA boundary tightly adjoins the existing Urban Footprint boundary to the north and east.

The resultant boundary used as part of the assessment for the draft *ShapingSEQ* 2023 Update is outlined in Figure 4.



Figure 4 - Southern Thornlands assessment area for potential inclusion within the Urban Footprint

Local Government considerations

A number of key local government considerations have been identified for the assessment area (refer Table 4), with the largest areas of unconstrained land being located in the central and eastern parts of the assessment area.

Table 4 - Key Local Government Considerations (Southern Thornlands)

Key local considerations	Response/implications
The assessment area is predominantly zoned Rural but is interspersed with three properties that are zoned Community Facilities. Two of these areas accommodate educational establishments (Sheldon College and Nazarene Theological College) and one is	RCC has submitted the Southern Thornlands PFGA Major Amendment to the planning scheme which seeks to provide more employment land but may also result in providing additional housing supply in the form of rural residential development.
in Council ownership. In the north-western corner of the assessment area, there are three Conservation zoned allotments that are owned by the Queensland Department of Transport and Main Roads (TMR).	However, there is a growing need to encourage the delivery of more diverse housing stock to more appropriately accommodate the ageing population and the decreasing household size anticipated for the LGA and considering the regional impact.
The assessment area is impacted by the 1% AEP flood level, which is limited to a network or watercourses and drainage lines (RCC Planning Scheme Flood Prone Area Overlay).	The approach for future development should mitigate the risks associated with the areas prone to flooding. Through structure planning, a thorough analysis of the assessment area should be undertaken to identify flood-prone areas and evaluate the severity and frequency of flooding. This assessment should consider historical data, topography, hydrological patterns, and climate change projections to understand the potential impact on future development.
The area is not serviced by trunk wastewater infrastructure and there are no plans to deliver this infrastructure under the LGIP or Council Netserv Plan.	The nature and scale of any potential future development proposed within the PFGA will ultimately determine the wastewater treatment options and other key infrastructure connectivity for the assessment area.
	The assessment area is located within the Heinemann Road and Mount Cotton water supply connection area. A bulk water supply pipeline intersects the centre of the assessment area in a north- south direction and connects the assessment area with the SEQ Water grid.
	Recent approvals for subdivisions within the assessment area comprise an additional 67 rural residential allotments, will be serviced by on-site sewer treatment. These development applications did not give any consideration to the possibility to connect to Council's reticulation infrastructure.
	Feedback received from SEQWater suggested that the preference would be to provide more intense urban uses given the issues with onsite systems being harder to support due to performance and maintenance.
Parts of the Southern Thornlands Potential Future Growth Area (the PFGA) are covered by the low and medium landslide hazard categories of the landslide hazard overlay. Only a relatively small area is identified as containing a medium landslide hazard.	Landslide hazard areas do not present a widespread constraint to development within the assessment area and can be addressed through detailed structure planning.
There are a number of waterways across the assessment area as identified in the Waterway Corridors and Wetlands Overlay. The overlay identifies both minor waterways and major drainage lines, including Epraprah Creek, which forms part of the southern boundary, Hilliards Creek (centre and west) and parts of the Thornlands catchment (north-eastern corner).	These areas are not considered suitable for intense forms of development and should be avoided.

State Government considerations

A number of state government considerations have been identified for the assessment area (refer Table 5).

Table 5 - Key State Government Considerations	(Southern Thornlands)
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Key state considerations	Response/implications
 Matters of State Environmental Significance (MSES) with mostly wildlife habitat and regulated vegetation, with minimal 'protected areas'. The key MSES constraints include: A waterway corridor and buffer in the Redland City Plan Waterway Corridors and Wetlands Overlay Code The entire area is mapped as Koala Priority Area (KPA) and parts of the assessment area are mapped as koala habitat area (KHA) Portions of the assessment area contain native vegetation as mapped in the Regulated Vegetation Management mapping under the Vegetation Management Act 1999 	 Consultation with a number of key state agencies indicated the following: Department of Resources (DoR) requested that references to MSES connectivity and importance be included in the regional plan and that they would like to be consulted to assist in further refining this area of the Urban Footprint. Department of Environment and Science (DES) recommended maintaining a 100m buffer both sides of waterways and areas adjoining wetlands to protect biodiversity where expansion occurs. The above concerns should be considered as part of any structure planning for urban development over the assessment area. RCC have also prepared a Wildlife Connections Plan which identifies a number of corridors that require protection or rehabilitation. The assessment area includes a number of these corridors with varying priority. Land identified as core habitat or that contains a Regional Riparian or Established Wildlife Corridor in the plan is recognised as highly constrained and unsuitable for more intense forms of urban development.
A significant portion of the assessment area is bushfire prone. It contains areas categorised as high and medium potential bushfire intensity, as well as potential impact buffer areas. The draft Queensland Fire and Emergency Services (QFES) bushfire mapping elevates some medium potential risk mapping to high and very high potential risk mapping. The draft mapping also identifies areas that have risk mapping removed or reduced risk.	Detailed technical assessment at the structure planning phase is required to understand the relationship with other relevant factors such as conservation corridor requirements, interfaces between vegetation and development areas and access requirements.
A large portion of the assessment area is identified as Agricultural land classification – Class A and B	Consultation with the Department of Agriculture and Fisheries (DAF) indicated that there is likely a need to put a transitional strategy in place for the development of Southern Thornlands until the relocation of the poultry farms (and other uses) occur.

State Planning Policy (SPP) Assessment

A preliminary assessment of Southern Thornlands' suitability to be included in the Urban Footprint has been undertaken against the State Planning Policy (SPP). Table 3 identifies the relevant state interests that are likely to apply to future development, based on current proposed land use intents.

A high-level Red, Amber and Green (RAG) Assessment (refer Table 6) has also been provided to indicate level of suitability, with Red indicating potential conflict with state interests, and Green indicating likely protection and potential furthering of state interests, if land is to be used for urban purposes.

Where the area is included in the Urban Footprint, urban development should consider the following:

- Koalas the area includes land within both the KPA and core koala habitat area. Development is largely prohibited when located in both of these mapped areas. Future development will need to avoid these areas where possible and the necessary environmental assessments will be required to ascertain existing ecological values that exist and how such values can be managed.
- Natural hazards the area is identified within the bushfire and flooding mapping areas under the SPP. The
 preparation of fit for purpose risk assessments that is consistent with SPP will be required as part of
 structure planning for the assessment area.
- Infrastructure planning significant infrastructure investment will be required by both the state and local government to service the area and the broader community.

Sch. 4(4)(4) - Disclosing deliberative processes

Although there are a number of state interests identified within the assessment area, there are some portions of the assessment area that can potentially provide for intense forms of development for residential and employment purposes where the interest can be appropriately managed and/or mitigated. When considering the regional need, the assessment area presents an opportunity to responsibly manage existing environmental and planning constraints to deliver much needed dwelling supply and future job opportunities for the region.

Table 6 – SPP Summary – Southern Thornlands

000 04 4		Sch. 4(4)(4) Disclosing
SPP - State interest	Assessment	deliberative processes
Housing supply and diversity	Inclusion of the Southern Thornlands area in the Urban Footprint would enable opportunity to deliver housing product to meet required dwelling supply, and to support the intent of this SPP. The proposed Rural Residential Precinct by RCC may be in conflict with the SPP and <i>ShapingSEQ</i> . The proposed structure planning by RCC proposes a single Rural Residential housing type for this precinct, which conflicts with the aim of this state interest to deliver diverse housing.	
Liveable communities	The assessment area has the potential to advance liveable communities. For example, the assessment area has the opportunity to create and implement high quality urban design, connected and vibrant places and protect the local landscape character and the natural environment. Sch. 4(4)(4) - Disclosing deliberative processes Sch. 4(4)(4) - Disclosing deliberative processes	
Agriculture	Agricultural land is identified within parts of the assessment area. Inclusion of the assessment area in the urban footprint will result in the loss of agricultural land.	T
Development and construction	The scenarios proposed for urban development at Southern Thornlands include residential, commercial, industrial and mixed-use development opportunities. Urban development at Southern Thornlands would support construction jobs, with commercial, industrial and mixed-use development supporting employment needs and economic growth in the longer term.	
Mining and extractive resources	The 'Key Resource Area – transport route separation area' is located in a small portion of the western boundary of the assessment area. The transport route separation areas (for Key Resource Areas) should be identified and protected as part of future PDA process or structure planning.	
Tourism	Given the need for housing supply and employment, tourism uses are unlikely in this area. It is noted that more people living in the area as a result of future development in Southern Thornlands may support the Winery and other tourist destinations in Redlands, such as Minjerribah.	
Biodiversity	Significant environmental values are located throughout the assessment area. Balance between the biodiversity and development and construction state interests are unlikely to be met – mitigation or minimisation strategies are required through careful structure planning or the PDA process. Specifically, the assessment area consists of areas that are identified as both a Koala Priority Area (KPA) and a Koala Habitat Area (KHA). Under the Planning Regulation 2017, development cannot occur in a KPA and KHA. Consultation with the Department of Environment and Science (DES) is required if areas of KHA are proposed to be removed. PDA-related development is considered an exemption for interfering with koala habitat and KPA however the assessment is still required at the time of considering the declaration of the PDA by EDQ.	
Coastal environment	The assessment area is not identified within the coastal management district area of the SPP Interactive Mapping System.	
Cultural heritage	National heritage places and state heritage places are not identified within the planning area. Future development would need to include further information to determine how indigenous cultural heritage interests are advanced.	
Water quality	The water supply buffer area is identified within assessment area. The assessment area should consider the environmental values and quality of Queensland waters are protected and enhanced. A very small portion of the assessment area on the western alignment is located within the Leslie Harrison Dam Drinking Water Catchment. SEQWater advised that urban residential is preferable to rural residential development as onsite water treatment is harder to support due to potential impacts to water quality. Where development is proposed on this assessment area, SEQWater requested that industrial development and land uses that may impact water quality be located away from the catchment area.	
Emissions and hazardous activities	Industrial land uses are required at Southern Thornlands to meet industrial land supply to 2046 for RCC. Consideration should be given to:	

Department of State Development, Infrastructure, Local Government and Planning

SPP - State interest	Assessment	Sch. 4(4)(4 Disclosing deliberative processes
Natural hazards.	 ensure that community health and safety, and the natural and built environment, are protected from potential adverse impacts of emissions and hazardous activities the local resource processing area (for example a quarry) located at 684-712 Mount Cotton Road Sheldon. Council has indicated that there may be a potential for the operation of the quarry to resume. As such, consideration would need to be given to nearby land uses so that residents and occupants are not adversely affected by the quarry. the implication of poultry farming on adjacent development, noting an intention to increase residential densities on adjacent land (e.g., proposed Rural Residential Precinct). Natural hazards, such as flooding and bushfire, are identified within parts of the assessment area, however there 	_
risk and resilience	are large parts of the area that are low to no risk. Future development would need to avoid or mitigate risk, protect people and property, and enhance the community's resilience to natural hazards. Future detailed investigations would be required along with structure planning to avoid and/or mitigate risks. A preliminary assessment undertaken by Meridian Urban suggests that the assessment area is not of strategic concern but recommend that a site-based bushfire risk assessment is required to help guide the planning and design responses.	
Energy and water supply	SEQ water pipelines and channels are located within the planning area. Future structure planning will assist in resolving issues around energy and water supply before development occurs. The assessment area is adjoining an existing urban area.	
Infrastructure Integration	The planning area is located outside of council's PIA of their LGIP. This means that the area is not planned to be serviced by bulk wastewater, water and stormwater infrastructure. This could potentially lead to ad hoc infrastructure planning.	
Transport infrastructure	The area is bound by two state controlled roads including Mount Cotton Road to the west and Boundary Road to the north. The council would need to determine any necessary road upgrades required to support urban development with the Department of Transport and Main Roads as part of the planning of any proposed amendment. Any future development would need to include further information that describes how infrastructure is intended to be delivered to support urban uses for the area. Future urban development would need to include an amendment to the RCC's PIA, LGIP and NetServ Plan to appropriately plan, fund and deliver infrastructure to service this new urban area.	
Strategic airports & aviation facilities	Strategic airports and aviation facilities are not located within proximity to the area.	1
Strategic ports	Ports are not located within proximity to the area.	1

Constraints – other

A number of other relevant considerations have been identified for the assessment area (Table 7).

Table 7 - Other Considerations (Southern Thornlands)

Other Considerations	Response/Implications
The assessment area is identified within the Quandamooka Coast Claim Native Title Area (QC2017/004).	No determinations of native title have been made for this application yet.
Vegetation protection covenants exist in a number of areas which legally require landowner to protect and preserve relevant environment features. There is also a subdivision approval along Woodlands Drive which includes a number of lots that include a number of building covenants.	A covenant can restrict the removal of vegetation and its removal will likely require written approval from Council or the property owner.
The land within the assessment area is highly fragmented with lot sizes ranging from 800m ² to ~69 hectares which may undermine the ability to amalgamate land that is feasible to develop and may limit the efficient delivery of infrastructure.	This is a significant constraint identified as part of the developability of this assessment area. There is a need for additional regulatory levers to address land fragmentation and support residential supply.
Sirromet Winery is a key vantage point located to the south of the assessment area and the southern portion	Detailed design and building height restrictions can assist with protection of scenic amenity values in this locality.

of the PFGA forms part of the Winery's viewshed and scenic outlooks.	
A very small portion of the assessment area on the western alignment is located within the Leslie Harrison Dam Drinking Water Catchment.	SEQWater advised that urban residential is preferable to rural residential development as onsite water treatment is harder to support due to potential impacts to water quality. Where development is proposed on this assessment area, SEQWater requested that industrial development and land uses that may impact water quality be located away from the catchment area (on the western alignment).

Dwelling supply need

There is demonstrated shorter- and longer-term need for dwelling supply in RCC and more broadly across SEQ. The shorter-term need is born in the current SEQ housing challenges and from a mismatch between housing stock and household needs, and the longer-term need is related to a shortfall in long term supply for detached dwellings.

Short-term need

Early outcomes from work on the Redland Housing Supply and Diversity Strategy (by GAT), indicates there is currently a mismatch between housing stock and household needs in the LGA. Whilst the current housing stock is dominated by detached dwellings, Redlands is characterised by an ageing population, highlighting a need to provide greater diversity in housing typologies, including more compact housing types. Additionally, rental stress is the key affordability challenge facing the LGA, signalling a clear opportunity to diversify housing stock to offer a broader range of price points for both renters and purchasers. There is also an existing need to provide for an estimated 858 families who are currently on the social housing waitlist.

It has been identified that 43% of Redlands residents work in the Redland City LGA. There is a significant proportion of population employed within the health care and social assistance sector. The on-call component of this workforce has specific locational needs (i.e., need to be within 20 minutes driving distance of the Redland Hospital when on-call), which needs to be considered in Redland City. This highlights the importance of providing suitable accommodation for local industry and key workers, including those employed at Redland Hospital.

The Redlands Housing Strategy 2011-2031 refers to the delivery of an additional 19,565 new dwellings between 2011 and 2026, comprising 11,785 infill dwellings and 7,780 greenfield dwellings, based on the draft Local Growth Management Strategy (LGMS). The infill dwelling target was anticipated to be met by existing land use allocations including mixed use and medium to high density development within Cleveland and Capalaba, medium density housing within proximity to public transport and dual occupancies and small lots within urban residential areas. However, it is clear from historic population and dwelling data that population growth has been accommodated mostly through greenfield development, as opposed to infill development. There has been a decline in the number of dwellings within low rise developments (up to three storeys) across the Redland City LGA in the 2016 to 2021 period, with attached dwellings in Cleveland have been delivered within high density developments, less than a quarter of new dwellings in Capalaba have been delivered as high density residential developments in the 2016 to 2021 period. This means that whilst houses and semi-detached products have been delivered in Redland City, the delivery of more compact housing typologies has not been widespread across the LGA, which has had implications for both dwelling diversity and affordability.

Sch. 4(4)(4) - Disclosing deliberative processes

Southern Thornlands is located-approximately 4km to Redland Hospital at its closest point, which can be travelled within 6-10 minutes, satisfying on-call worker needs, which represent a significant component of the local workforce. Further analysis is currently being undertaken to determine what amendments can be made to the Redland City Plan 2018 to facilitate the delivery of additional infill development (particularly for attached dwelling typologies), within the existing urban areas of Redland City, recognising that the Southern Thornlands PDA represents only a part of the solution to current housing challenges faced by Redland City.

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The applied policy intervention assumptions for Southern Thornlands assumes 30% of total houses or approximately 2,000 will be attached.

Longer-term need

The MULTI results for the base case scenario (Table 8) indicate that the remaining residential dwelling capacity in RCC to 2046 is approximately -2,131 dwellings or -2.5%. This indicates a clear need for a regional planning policy intervention to address this shortfall in capacity. The modelled inclusion of Southern Thornlands indicates a high demand for housing which achieves a rate of growth to being fully developed in the planning period. It suggests that its inclusion within the Urban Footprint and assumed commencement at 2026 it can play an important role in meeting short and medium term residential supply.

With the inclusion of Southern Thornlands as Urban Footprint and assumed commencement at 2026, Redland has the capacity (size) to accommodate the needed dwellings. It is relevant to note supply constraints will start to influence rate of supply before 2046 and will slow growth and undermine affordability. Further in the context of the SEQ housing challenges Southern Thornlands presents an opportunity to provide residential supply in short to medium term.

With the inclusion of Southern Thornlands and the other planning interventions which apply across the region the resultant growth rate is 1.08%. While this presents a challenge in planning and servicing this growth rate is comparable to historic growth for the period of 2001 - 2021 which was 1.93%.

Table 8 – Summary of ShapingSEQ 2023 Update baseline results (Redland)

LGA Name	2021	2046	Projected Growth Rate/year (2021-2046)	Actual Growth Rate/year (2001-2021)	% of remaining capacity
Redland City Council	65,014	84,995	1.08%	1.93%	-2.5%

s. 73(2) - Not relevant/ Out of scope

Employment need

As discussed above, the Redland LGA is expected to have a shortage of industrial land under multiple demand scenarios. Supply and demand estimates suggest the remaining capacity of industrial land within Redland LGA was between 10 years and 28 years. However, the 28-year capacity estimate assumes industrial land take-up of only one hectare per annum. There is a high likelihood that Redland LGA would exhaust its remaining supply of industrial land within the life of ShapingSEQ (2041), and therefore within the life of the ShapingSEQ 2023 Update (2046). A 2020 study by CDM Smith that was commissioned by RCC (Economic Feasibility Assessment for Southern Thornlands Potential Future Growth Area) corroborates a finding that Redland LGA will exhaust its remaining supply of industrial land within the life of Shaping SEQ. The 2020 study further identified the need for 75ha of industrial allotments and 50ha of MIBA allotments within the LGA.

Analysis carried out by Bull and Bear Economics (June 2023) found that if the major scheme amendment proposed by Redland City Council would address the likely shortfall in industrial land supply within Redland LGA to 2046. The inclusion of ~100 hectares of MIBA land immediately south of Redland Bay Road would provide significant

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capacity for a major new employment area within Redland LGA with good arterial road access, which ultimately accesses the SEQ strategic freight network via the Gateway Motorway, as well as direct access to the Capalaba Principal Regional Activity Centre.

Previous investigations undertaken by RCC have also suggested limited scope to establish new precincts within eastern Brisbane and the Brisbane LGA more broadly.

Assessment against the Urban Footprint principles

The following provides an assessment of Southern Thornlands against the Urban Footprint principles which are outlined in the draft ShapingSEQ 2023 Update to determine appropriateness of inclusion in the Urban Footprint for the draft *ShapingSEQ* 2023 Update.

Table 9 – Urban Footprint Assessment (Southern Thornlands)

Dr	aft Urban Footprint Principles	Response
1.	The Urban Footprint is a tool for managing, rather than simply accommodating, regional growth.	Inclusion of Southern Thornlands within the Urban Footprint will support additional required dwelling supply in the Redland LGA and required industrial land and contributes supply for detached dwellings needed across SEQ. By providing supply in Redland, it provides housing choice across the region other than in location with extensive supply (Logan, Ipswich). Further it provides an alternative form of supply to compliment with additional supply provided and planned within the infill area. The area adjoins existing footprint, is within an urbanised area and will have the opportunity to utilise existing infrastructure available within the locality.
2.	The Urban Footprint promotes a compact settlement pattern and consolidates urban development within established communities.	The Redland City Plan 2018 does not provide sufficient housing diversity within the assessment benchmarks of the planning scheme. For example, the Low-Medium Density Zone Code or the Medium Density Residential Zone Code within the planning scheme does not facilitate a mix of dwelling types within its assessment benchmarks. There is also a clear lack of capacity for dwellings as per the assessment undertaken as part of the draft <i>ShapingSEQ</i> 2023
		Update. DSDILGP in partnership with RCC are preparing a housing strategy focusing on housing diversity.
		A key constraint of the inclusion of the assessment area in the urban footprint is a lack of transport infrastructure in the surrounding area. However, the expansion presents a logical extension of an established community. The area benefits from access to a number of other facilities and community infrastructure including:
		 Redland Hospital – a major health centre with co-located residential care facility and UQ Redland Hospital Training Centre Redland Bay State School Mt Cotton State School Sheldon College Redland Performing Arts Centre Redland Museum Griffith University accessible via bus route
		Previous investigations undertaken by Empower Engineers have also identified options for providing wastewater treatment infrastructure. This concluded that a semi centralised wastewater infrastructure system can be achieved. The area is not sewered and no Council plans to sewer under the Local Government Infrastructure Plan (LGIP).

		 It is adjacent to existing services and provides a logical extension south of Thornlands and west of Victoria Point. A desktop analysis indicates the following: A number of newly constructed subdivisions have occurred to the north of the assessment area along Kinross Road The assessment area is bounded by residential zoning to the north in Capalaba and Medium Density Zoning directly north along Boundary Road. The assessment area would provide a sensitive transition to Rural zoning further south where appropriate master planning is undertaken. The assessment area is located approximately 2.1km from Major Centre Zoning (Victoria Point)
3.	Opportunities to increase the capacity of the Urban Footprint take priority over expanding its boundaries in subsequent regional plan review processes.	The capacity of the Urban Footprint in terms of current planning scheme policy within the RCC LGA is reaching capacity. As per the results from the MULTI, there is limited if not no remaining capacity at 2046. Increasing capacity within the existing Urban Footprint is being assumed through the regional plan assumed policy interventions i.e. gentle density in Low Density Residential zone. There remains a regional need to accommodate 355,000 detached dwellings. While the policies proposed in the draft ShapingSEQ 2023 Update focus on consolidation and increasing capacity of land in the Urban Footprint through increasing densities in high amenity areas (centres, high-frequency public transport routes etc.), the preferred scenario for the draft update indicates that there the inclusion of Southern Thornlands does contribute significantly to housing and industrial land supply. Of particular note, there are no further opportunities within the urban footprint to accommodate the proposed industrial land uses.
4.	The Urban Footprint is not used to recognise isolated, existing or approved urban activities outside the Urban Footprint, or to reflect urban zoning in small coastal or rural towns and villages.	The assessment area is located directly adjacent to existing Urban Footprint and is a logical extension of the existing settlement pattern. It is located within the PFGA which has been subject to investigations by Council which confirmed their appropriateness for industrial land uses in part. While the Council investigation supported rural residential development, this use is considered to be an underutilisation of land required to meet regional and local housing needs.
5.	 The Urban Footprint boundary is generally: a. cadastral-based or otherwise clearly defined, preferably using a major feature, such as a road or stream, to provide a clear boundary and buffer between urban and non-urban land uses b. consistent with existing planning scheme designations, where appropriate 	The area is consistent with the endorsed Council boundary and is bound by Boundary Road (two-lane carriageway) and Duncan Road – which are both state-controlled road to the north The assessment area is also bound by Mt Cotton Road along the western alignment which is also a state-controlled road. These are all arterial roads. The assessment area also bounds the lower creek line that runs along the southern boundary which appropriately provides a transition to the Regional Landscape and Rural Production Area further south and Sandy Creek Conservation Area. RCC are also in the process of amending the planning scheme to rezone the land for more intense uses than the current designation. Providing urban footprint in this area will support this future intent.
6.	During periodic reviews of ShapingSEQ, and based on whether the Queensland Government's SEQ Growth Monitoring Program identifies a need for more urban land, new areas may be considered for inclusion in the Urban Footprint where they: a. are physically suitable	Southern Thornlands is considered suitable given its location adjacent to the Urban Footprint and ability to be serviced by existing road infrastructure. The PFGA is also in proximity to educational facilities, including Sheldon College. The PFGA is located outside of the Priority Infrastructure Area, as identified in the LGIP. The council's current infrastructure planning approach would require a substantial augmentation to the sewer network to accommodate

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b.	are either a logical expansion of an urban area or of sufficient size to provide social and economic infrastructure efficiently	the growth potential. With the Council as the ultimate owner of the infrastructure, this issue will be one of the major points of negotiation through any potential future planning processes.			
C.	have ready access to services and employment	The assessment area is also located in proximity to existing services and employment opportunities located in Victoria Point and Thornlands.			
d.	maximise the use of committed and planned urban infrastructure	Future planning will also need to consider the poultry farms within			
e.	are separated appropriately from incompatible land uses	the south of the assessment area and former quarry site on Mount Cotton Road. Amenity impacts such as odour, noise and dust can be appropriately managed in the event of redevelopment. Future			
f.	f. maintain the integrity of inter-urban breaks	structure planning will ensure appropriate buffer distances are in place for any sensitive or hazardous land uses in close proximity.			
g.	exclude areas with an unacceptable risk from natural hazards, including predicted	The PFGA is not located near an inter-urban break.			
h.	matters of national or state environmental significance and the regional biodiversity network, including koala habitat	The assessment area is identified as having a number of areas containing matters of state environmental significance, particularly being located within koala priority area. Desktop analysis indicates that there are significant portions of the assessment area that are clear of vegetation and used for rural residential purposes, limiting consistent movement corridors for koalas and other fauna.			
i.	achieve an appropriate balance of urban development in the SEQ region and associated sub-regions	Structure planning will also facilitate the required retention of ecological features on the assessment area as required and			
j.	maintain a well-planned region of urban areas, towns and villages	identification of unconstrained land. However, further investigation are required before development can be achieved to ensure future development does not negatively impact on existing ecologically			
k.	minimise impacts on natural economic resources which are mapped and are covered by Element 6 of Sustain	features. A frequent public transport route also runs along Boundary Road along north of the assessment area to the Victoria Point Centre			
I.	avoid irrevocable impacts to important, sensitive natural environments in and	Shopping Centre. There are also frequent bus services connecting the assessment area to Griffith University			
	outside the area	A number of other key amenities and services in close proximity to the area includes:			
	provide physical and social infrastructure efficiently, including public transport.	 Crystal Waters Park Pinklands Recreation Reserve A number of walking and cycling trails Bayview State School Redlands District Special School Carmel College Cleveland District State School Weippin St Conservation Area Scribbly Gums Conservation Area Victoria Point Beach Front Walk Point Halloran Conservation Area 			

Recommendation

It is recommended that Southern Thornlands be included as part of the Urban Footprint to provide for needed additional residential and employment land supply by 2046.

The inclusion of Southern Thornlands within the Urban footprint will:

- Address in part the regional demand for additional housing supply particularly in the short term;
- Address in part, Redlands and SEQ need to accommodate the need for diverse housing including detached homes;
- Implement Council policy to deliver employment generating land within the Redlands.

Southern Thornlands is the only identified location within the Redland LGA that can accommodate a significant area of industry and business uses, with good arterial road access, which ultimately accesses the SEQ strategic freight network via the Gateway Motorway, as well as direct access to the Capalaba Principal Regional Activity Centre.

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If declared a PDA, a Development Scheme will need to consider current housing shortages and the need to accommodate diverse housing product. A commitment is required from EDQ to set meaningful requirements for affordable housing and a range of housing options, whilst ensuring the ecological values of the site assessment area are carefully managed or avoided.

Further investigations into the required infrastructure and service delivery are needed for greater densities in this area including educational establishments, transport networks and active transport infrastructure.

A preliminary assessment undertaken in relation to natural hazards suggests that the assessment area is not of strategic concern but recommend that a site-based bushfire risk assessment is required to help guide the planning and design responses.

s. 73(2) - Not relevant/ Out of scope

Pages 26 through 72 redacted for the following reasons: s. 73(2) - Not relevant/ Out of scope

Draft ShapingSEQ 2023 Update

Model for Urban Land Use and Transport Interaction (MULTI)

This document outlines the modelling framework used as part of the project to understand population and dwelling projections the Department of State Development, Infrastructure, Local Government and Planning (the department) has used to inform the *ShapingSEQ* 2023 Update (known as the Model for Urban Land Use and Transport Interaction (MULTI)).

Stronger alignment between land use and infrastructure planning enhances the ability to deliver a preferred settlement pattern. Close integration between land use and infrastructure planning enables the delivery of development in a coordinated manner to not just deliver housing but to maximise community and economic outcomes, in line with a preferred settlement pattern.

Growth assumptions forecast the type, scale, location, and sequencing of development, and is often associated with population, employment, dwelling and floorspace projections. Data-driven land use growth assumptions are increasingly used by local and state governments in Queensland to inform infrastructure planning.

Since June 2022, the Department of Transport and Main Roads (DTMR), in collaboration with the department, commenced with implementing the model for SEQ. The draft *ShapingSEQ* 2023 Update utilises this new modelling platform to analyse growth assumptions and support integrated land use and infrastructure planning at a regional level. A wide variety of computer models are used to develop growth assumptions in SEQ. Since 2018, the MULTI has been under development in partnership between DTMR, University of Queensland (UQ), the department, in consultation with local governments as part of SEQ Growth Monitoring Program (GMP).

MULTI, unlike many other urban growth models, can capture housing demand drivers across the region that dynamically change through time in response to changes in land use planning and infrastructure investment. These factors were informed by an extensive research project with the University of Queensland, funded by the iMOVE Cooperative Research Centre program, an Australian Government initiative.

MULTI capabilities

MULTI dynamically integrates economics, transport modelling, demographics, and land use planning to test growth scenarios across SEQ for planning and decision making. The MULTI considers various factors that impact demand and take up including:

- how housing demand and location choice interacts with available housing supply, considering infrastructure servicing across SEQ
- understanding the land use benefits unlocked from major future planned transport infrastructure investment projects, such as Cross River Rail, Coomera Connector, Brisbane Metro, which will be used to support preliminary evaluations and business cases through Infrastructure Australia
- involving the dynamics of the housing market across the region in response to changes in accessibility, land use policy and transport outcomes
- informing the suitability, sizing, and potential future growth requirements for the urban footprint and, dwelling supply targets
- key infrastructure connectivity considerations that may impact future growth.

MULTI accounts for movement and land use dynamics across local boundaries and serves as a holistic source of information. Together with model systems in local government and utility providers, MULTI provides for a rich source of information for planning policy and decision making across the region.

For example, the MULTI has the ability to:

- provide a data driven and evidence-based methodology with a transparent modelling framework that is scalable to meet stakeholder needs
- build a robust evidence base to understand the uplift potential and wider economic benefits relating to infrastructure investment and land use planning decisions
- provide state government, and local governments that choose to do so, with the ability to test different infrastructure scenarios with land use planning changes (up zoning, redevelopment)



- effectively engage on growth and testing of policy, macroeconomic or technological changes or events (e.g., Olympics)
- significantly improve the analysis and modelling that underpins project business case submissions for major infrastructure projects.

Table 1 provides a breakdown of the MULTI capabilities.

Table 1: Multi modelling demand and supply factors

	ShapingSEQ 2017	ShapingSEQ 2023 Update
Supply factors		
Zoning	Yes	Yes
Land suitability	Yes	Yes
Ultimate development	Yes	Yes
Development feasibility (financial feasibility model)	No	Yes
Transport infrastructure	No	Yes
Realistic take-up rates	No	Yes
Water/waste infrastructure provision (ability to service)	No	Yes
Demand factors		
Household changes	Yes	Yes
Dwelling type requirements	Yes	Yes
Transport accessibility	No	Yes
School catchments and ranking	No	Yes
Location attractors	No	Yes
Socioeconomic factors	No	Yes

The above includes the use of a population demand model that includes factors that relate to demand and supply of the housing stock in the SEQ context including transport accessibility variables. The following key variables that have a strong contribution to the predicting power of the MULTI includes:

- planning permits issued by the local city councils for prediction of supply
- quality of schools in the area reflecting the fact that families often select their place of residence based on a specific school catchment zone
- index of socioeconomic advantage and disadvantages of the areas
- proximity to commercial land, community, health and educational land uses
- distance to the coast which captures a positive value from proximity to the coast where the populated areas are located
- distance to the closest regional activity centre
- travel time to work on all transport modes (car, bike and public transport).

The location attractors considered as part of the modelling includes land use considerations and proximity to activity centres, parks, recreation, coastline, healthcare, retail, restaurants and cafes, and distance from constrained land and industrial uses.

This framework provides a theoretical and practical contribution to the modelling of land use and population scenarios. The analysis undertaken by the Queensland Government takes into account realistic developability to the greatest extent possible in regional planning practice for Queensland. This analysis has directly informed spatial pattern of growth to 2046.

Testing draft regional policy options (scenarios)

An important step in modelling growth is exploring the impact of draft policy options (scenarios). This allows for testing of multiple different variables and multi-criteria evaluation, to produce more reliable outcomes for analysing historical changes and future predictions. A baseline scenario was developed using the draft *ShapingSEQ* 2023 Update population projections to 2046, and using the current planning policy settings as they stand today (and as provided by local governments). The baseline scenario assesses the number of dwellings that could potentially be supplied by 2046 with current statutory planning policy settings in SEQ given what ultimate capacity (maximum zoned capacity) remains.

The results from the baseline scenario provide a regional wide perspective on planned dwelling supply performance which is then used to guide draft policy option development (alternative scenarios).

The baseline scenario includes the following input assumptions:

- ShapingSEQ 2023 Update Population Projections
- current dwelling count estimates (from land use and activity data and the Census)
- population & household characteristics (Census)
- infrastructure layer (Ability to Service)
- development & building approvals to June 2022
- most recent Local Government Infrastructure Plan (LGIP) planning assumptions from Local Government Areas (LGA) (maximum allowable density, developable area, etc.)
- updated transport network to 2046
- realistic take up rates
- Caboolture West NDP1 adjustments.

The analysis undertaken by the Queensland Government takes into account realistic developability to the greatest extent possible in regional planning practice for Queensland. This analysis has directly informed spatial pattern of growth to 2046.

The model results from an alternative scenario are then compared with the baseline scenario to assess the impact of draft policy options over time and spatially. The policy directions were tested and alternative scenarios have been developed with the following key components of growth management:

- size accommodating future households in accordance with a preferred settlement pattern
- **speed** having improved knowledge about barriers to growth can we meet the required rate of housing delivery
- mix will the region be able to deliver necessary diversity in housing types for new and changing households.

The multi-scenario technique has allowed for a comparison of the outcomes of three scenarios for the draft *ShapingSEQ* 2023 Update. The use of the scenarios modelled by the MULTI has informed the proposed regional use policy design and contributes to more diverse and sustainable land use planning goals and objectives.

Growth Monitoring Program

Since the release of *ShapingSEQ* in 2017 with a planning horizon out to 2041, the Growth Monitoring Program (GMP) has continued to invest in improving governments' understanding of drivers for land supply and housing in SEQ. This has included ongoing work with local governments, utility providers and the development industry on improvements to better forecast and measure land supply and monitor its development.

Key themes for improvements to the Land Supply and Development Monitoring (LSDM) have been raised through the LSDM expert peer review report (April 2022) and ongoing work linked to the Queensland Housing Summit (October 2022). This work is continuing, with the update to *ShapingSEQ* providing a timely opportunity to utilise and build upon work undertaken since 2017. A key focus of the update is how regional planning, including land supply measurement and monitoring, should more clearly and responsively link to infrastructure and land use planning policy decisions – responding to the outcomes sought by CoMSEQ through the SEQ Regional Planning Committee (RPC).

Key Outcomes

The use of the MULTI model has proven to be a valuable tool in informing the policy levers for the draft *ShapingSEQ* 2023 Update. By harnessing the power of data and advanced analytical techniques, the department has had the ability to gain crucial insights into the complex urban dynamics and make informed decisions that align with the needs and aspirations of the region. With respect to the preferred scenario, the MULTI model has informed the following:

- data-driven dwelling supply and dwelling diversity targets for areas of the region using demand and supply factors to inform how and where dwelling supply is projected.
- Urban Footprint changes to respond to supply need and to support regional planning policies
- evidence-based policy narrative to drive the need for more gentle density, which is currently not being delivered across the region

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• preliminary planning of an implementation assurance framework to support the final ShapingSEQ 2023 Update.

It should be acknowledged that modelling should not be seen as a standalone solution, but rather as a tool that supports the broader regional planning implementation framework. The accuracy and effectiveness of models depend on the quality and availability of data, as well as the assumptions and methodologies used. Robust validation and continuous refinement of models are crucial to ensure their reliability and relevance.

In conclusion, the MULTI modelling offers a powerful means to inform policy levers in the draft *ShapingSEQ* 2023 Update. By leveraging data-driven insights, the draft *ShapingSEQ* 2023 Update is evidence-based and promotes sustainable urban development, while creating vibrant, inclusive communities that meet the housing needs of the region.

MEMORANDUM #1.1

information only | seeks feedback | seeks endorsement

FROM: Nicholas Patorniti

TO: Malcolm Griffin, Michelle Cottrell, Francis Selzer, Andre Brits, Lauren Mudd, Emma Tremble, Sherry She

DATE ISSUED: 07 April 2023 REQUESTED DATE TO BE ACTIONED: n/a SUBJECT: Land supply layers for integration into the Multi-model ShapingSEQ Review.

In the context of the ShapingSEQ Review, data pertaining to land supply information was sourced from the Councils located across the Southeast Queensland (SEQ) region, encompassing a total of 12 local government areas (LGAs). Due to variations in the availability of data provided by the respective Councils, the currency of the sourced information was found to differ across LGAs. The most current information available was selected and is detailed below to document the land supply data information used to inform the MULTI model runs.

LGA	Notes: Land supply layers for integration into the Multi-model ShapingSEQ Review
s. 73(2) - Not relevant/ Out	of scope
Redland	The most recent available land supply dataset from Redland, which was provided
	to TMR on the provision that the data is not shared with other government
	departments, has been selected, i.e., 'OUT_FC_PropertyBase_ResGrowthAllocation'. Derivative work can be shared
	with DSDILGP.
s. 73(2) - Not relevant/ Out o	f scope

MEMORANDUM #2.1

information only | seeks feedback | seeks endorsement | endorsed

FROM: Nicholas Patorniti

TO: Malcolm Griffin, Michelle Cottrell, Francis Selzer, Andre Brits, Lauren Mudd, Emma Tremble, Sherry She

DATE: 07 April 2023 RESPONSE PROVIDED: 6 April 2023

SUBJECT: ShapingSEQ Review of Existing Urban Area (EUA) Boundary

<u>Context</u>: In the context of the ShapingSEQ Review, data pertaining to the Existing Urban Area (EUA) was updated to include an up-to-date and refined classification of areas within the EUA, i.e., 'Consolidation' areas, and outside the EUA, i.e., 'Expansion' areas.

<u>Method</u>: The method used for updating the EUA across the Southeast Queensland (SEQ) region encompassed the steps described below:

- 1. ASGS (SA2/SA1) update analysis Assessment of the differences from 2016 to 2021 boundaries/names.
- Consolidation/expansion classification classification of the 2021 ASGS boundaries of SA1s and SA2s as 'Consolidation' or 'Expansion' based on their characteristics, e.g., area and average land parcel size, which are indicators of population and urban density, respectively. A rule-based approach was adopted as described in Appendix A.
- 3. Refinement Selection of the EUA boundary granularity (SA1 or SA2) and areas classified by reviewing the updated EUA boundary. This refinement step will be undertaken in consultation with the joint project team as part of this Memo #2.

<u>Results</u>: In total, 36 SA2s were updated from the 2016 to 2021 ASGS boundaries, including three SA2s with minor increases to their areas (i.e., Wurtulla – Birtinya, Southport – North, and Nudgee – Banyo), one SA2 with a minor name change (i.e., from Kingston (Qld.) to Kingston (Qld)), and the remaining 32 SA2s with major changes through the division of their original areas (please refer to details in Appendix B).

Using SA1 boundaries showed a significant improvement in the representation of urban areas when compared to the ShapingSEQ 2017 EUA boundary. Using SA1s is in line with Chapter 5 of ShapingSEQ (2017) – 'Measuring our success', which states in the item 'Consolidation and expansion boundary' the following:

'To inform the next review of the regional plan, it will be investigated whether the availability of such information to both state and local governments will support a more refined spatial distinction between consolidation and expansion.'

The updated classification at a SA1 level provides a more detailed spatial representation of EUA, which enables more informed development monitoring in consolidation and expansion areas, including growth front areas. Further, it provides improvements in the representation of expansion and consolidation benchmarks as they will more closely align with the EUA as at 2021. The classification at an SA2 was also improved in relation to the ShapingSEQ 2017 EUA by calculating the prevalence of consolidation and expansion areas from the SA1s encompassed within the SA2 (refer to Appendix C for details).

Of note is the classification of regional township SA1s as EUA (i.e., consolidation), including other periphery satellite urban development settlements. At SA2 level, these areas are classified as outside the EUA (i.e., expansion). A decision has been made from the review team to utilize the SA1 EUA boundary but with the feedback to policy message EUA in Lockyer, Somerset, Scenic Rim and rural towns in Toowoomba differently; or have the option to remove them from consolidation.

As the updated EUA at a SA1 level has been adopted, minor adjustments to the calculation of the measure Dwelling Growth in the Land Supply and Development Monitoring (LSDM) report will be required. More specifically, SA1 level Building Approvals data published by the Australian Bureau of Statistics (ABS) will be required. This data is available by request under a charged service. The modelling team has received a quote from ABS for this data. It is available at SA1 quarterly unlike SA2 at monthly releases. For the MULTI PopDAM module, the SA2 classification version is proposed to maintain functionality – all other parts of MULTI to use SA1.

Appendix A – Classification method and results.

The classification of SA1s and SA2s included the following expressions:

1. General SA1 classification: The SA1 classification was based on the expression:

if [MB_CAT21]="Education" or [MB_CAT21] = "Commercial" or [MB_CAT21] = "Hospital/Medical" or [MB_CAT21] = "Industrial" or [MB_CAT21]="Transport" then "Consolidation" elseif [Area_sqm] <= 500000 then "Consolidation" elseif [Area_sqm] <= 2000000 and [Median_Lot_area]<=2000 then "Consolidation" else "Expansion" endif'.

where: MB_CAT21 is the most prevalent land use classification of mesh blocks within the SA1 (excluding 'Other' – undefined or mixed use land use category), Area_sqm is the area of an SA1 in square metres, and Median_Lot_area is the median land parcel area of master lots within an SA1.

The area and median land parcel thresholds were defined based on descriptive statistical analyses to identify representative ranges for consolidation and expansion areas based on a sample of 157 SA2s adjacent to SA2s from the same category (i.e., consolidation only or expansion only SA2s) without geometry or name change between 2016 and 2021.

- 2. **General SA2 classification**: Based on the SA1 classification, define the most prevalent (i.e., consolidation or expansion) area coverage within the SA2.
- 3. **SA1 treatment 1:** Creation of a homogeneous existing urban area layer by dissolving all consolidation SA1s into a single area and reclassifying minor areas classified as expansion (e.g., special purpose zones) surrounded by consolidation only.
- 4. **SA2 treatment 1:** Creation of a homogeneous existing urban area layer by dissolving all consolidation SA2s into a single area and reclassifying minor areas classified as expansion (e.g., special purpose zones) surrounded by consolidation only.
- 5. **SA1 treatment 2:** Reclassification of SA1s to the most prevalent classification across SA1s in the same SA2 if the proportion of the class (i.e., consolidation or expansion) is equal or greater than 90% and the SA1 area is equal or smaller than 50 ha.
- 6. **SA2 treatment 2:** Reclassification of SA2s if all composing SA1s except the largest SA1 belongs to the opposite category (e.g., in the Main Beach SA2 the largest area is a conservation area that was driving the classification to expansion rather than consolidation). This treatment is not applied to islands (e.g., Moreton Island).
- 7. **SA1 treatment 3:** From the Memo#2 feedback, a step was included to remove SA1s that are outside the ShapingSEQ2017 Urban Footprint. 22 SA1s were removed from this step.

The results of the analysis at SA1 level is illustrated in the following map.



Fig A1. SEQ-wide Existing Urban Area classifications at SA1 level and Urban Footprint.

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SA2 CODE	SA2 CODE	SA2 NAME 2021	SA2 NAME 2016	Area 2021	Area 2016	Area change
2021	2016	3/2 10/10/12 2021	3/2 17/17/2 2010	(Sq.Km)	(Sq.Km)	(%)
316021424	316021424	Wurtulla - Birtinya	Wurtulla - Birtinya	6.84	6.63	3.2
309091540	309091540	Southport - North	Southport - North	7.71	7.62	1.3
302031039	302031039	Nudgee - Banyo	Nudgee - Banyo	13.92	13.76	1.2
311061330	311061330	Kingston (Qld)	Kingston (Qld.)	6.81	6.81	0
			Scarborough - Newport - Moreton			
313051574	313051542	Moreton Island	Island	175.31	183.42	-4.4
301021550	301021527	North Stradbroke Island	Redland Islands	277.10	317.04	-12.6
309071554	309071257	Pimpama - North	Pimpama	31.86	40.73	-21.8
310011564	310011273	Forest Lake - Ellen Grove	Forest Lake - Doolandella	11.01	15.04	-26.8
311041570	311041321	Jimboomba - Glenlogan	Jimboomba	181.66	249.65	-27.2
311041568	311041320	Flagstone (West) - New Beith	Greenbank	185.75	258.45	-28.1
313021572	313021365	Caboolture - East	Caboolture	49.86	74.45	-33
314021577	314021388	Kallangur	Dakabin - Kallangur	11.07	16.64	-33.5
316021580	316021420	Caloundra West - Baringa	Caloundra - West	47.39	71.64	-33.8
309071553	309071255	Ormeau (West) - Yatala	Ormeau - Yatala	46.55	72.15	-35.5
310041565	310041296	Augustine Heights - Brookwater	Bellbird Park - Brookwater	9.59	16.10	-40.4
309101562	309101270	Surfers Paradise - South	Surfers Paradise	3.34	5.80	-42.4
314021578	314021390	Mango Hill	North Lakes - Mango Hill	15.36	27.16	-43.5
309081559	309081261	Robina - East	Robina	8.33	14.96	-44.3
		Upper Coomera (South) -				
309071556	309071258	Wongawallan	Upper Coomera - Willow Vale	68.85	125.84	-45.3
309081560	309081261	Robina - West	Robina	6.63	14.96	-55.7
314021579	314021390	North Lakes	North Lakes - Mango Hill	11.80	27.16	-56.5
309101561	309101270	Surfers Paradise - North	Surfers Paradise	2.46	5.80	-57.6
310041566	310041296	Bellbird Park	Bellbird Park - Brookwater	6.51	16.10	-59.6
309071558	309071258	Willow Vale - Pimpama (West)	Upper Coomera - Willow Vale	45.88	125.84	-63.5
309071552	309071255	Ormeau (East) - Stapylton	Ormeau - Yatala	25.60	72.15	-64.5

Appendix B – SA2s with updated geometry and/or name from 2016 to 2021.

SA2 CODE	SA2 CODE	SA2 NAME 2021	SA2 NAME 2016	Area 2021	Area 2016	Area change
2021	2016	SAZ NAME 2021	SAZ NAIVIE 2016	(Sq.Km)	(Sq.Km)	(%)
		Meridan Plains - Little Mountain				
316021581	316021420	(North)	Caloundra - West	24.04	71.64	-66.4
314021576	314021388	Dakabin	Dakabin - Kallangur	5.57	16.64	-66.5
313021573	313021365	Caboolture - West	Caboolture	24.59	74.45	-67
311041569	311041320	Greenbank - North Maclean	Greenbank	72.70	258.45	-71.9
310011563	310011273	Doolandella	Forest Lake - Doolandella	4.03	15.04	-73.2
311041571	311041321	Yarrabilba	Jimboomba	39.07	249.65	-84.3
301021551	301021527	Southern Moreton Bay Islands	Redland Islands	39.93	317.04	-87.4
309071557	309071258	Upper Coomera - North	Upper Coomera - Willow Vale	15.60	125.84	-87.6
311041567	311041321	Flagstone (East) - Riverbend	Jimboomba	28.92	249.65	-88.4
309071555	309071257	Pimpama - South	Pimpama	4.38	40.73	-89.2
			Scarborough - Newport - Moreton			
313051575	313051542	Scarborough - Newport	Island	8.11	183.42	-95.6

MEMORANDUM #3

information only | seeks feedback | seeks endorsement

FROM: Nicholas Patorniti

TO: Malcolm Griffin, Michelle Cottrell, Francis Selzer, Andre Brits, Leon Doutre

DATE: 04 April 2023 RESPONSE REQUESTED BY: 6 April 2023

SUBJECT: LGA and Growth areas planned dwelling capacity summary for the ShapingSEQ Review

<u>Context</u>: MULTI requires ultimate (i.e., maximum zoned capacity) attached and detached planned dwelling supply inputs to the MULTI land supply module. In the absence of a Regional Planning Model, Local Government land supply databases are used for the purposes of the regional plan review. This memo sets out the integration of Local Government land supply data to produce a summary table of planned dwelling capacity by LGA and by Growth Area.

The summary table aims to assist with the formation of the baseline model, and the alternate scenario model runs in MULTI. For example, what growth area capacity is included.

As at Memo #3, land supply databases used are detailed in Memo#1.1. Growth areas included are Major Development Areas (MDA), Priority Development Areas (PDA), Residential Growth Areas (RGA), and 30 underutilized footprint (UUF) areas from 2018. It is anticipated more current UUF areas will be provided, and the addition of Potential Future Growth Areas (PFGA), Targeted Growth Areas (TGAs), and State Development Areas (SDA). This memo will be updated with this information as it becomes available.

<u>Method</u>: The method used for creating the LGA and growth areas summary across the Southeast Queensland (SEQ) region encompassed the steps described below:

- 1. Land supply data collection and identifying ultimate fields (see Appendix B)
- 2. Combining LGA land supply data Alteryx workflow (see Appendix C for files names)
- 3. Joining growth area names to combined land supply dataset.
- 4. Generate LGA and Growth areas capacity summary table

<u>Results</u>: Results in Appendix A detail the growth areas that do not have any, or minimal, assigned supply in the LGA land supply data. They also detail the growth areas which have allocated capacity, the amount, and how this differs from GAT and EDQ assumptions. The land supply data provided by Local Government is primarily prepared for the purposes of a Local Government Infrastructure Plan (LGIP) and generally incorporates capacity that is included in the local planning scheme and statutory planning schemes and development approvals granted at the time of the preparing the data. Some may, however, include capacity that is not statutory at the time of the review.

Variances were observed between the land supply data supplied by Councils and QLUAD for the existing 2021 development. Variances were also observed between the remaining capacity calculated between remaining capacity as reported in the LSDM report and the results from this study. The main factor is the use of QLUAD as opposed to the LSDM using constructed dwelling estimates and Council existing development at the base date of the land supply data.

The land supply data available from Councils was provided over varying time periods (from 2018 – 2023). Therefore, capacity included may not incorporate the current planning scheme or growth areas in effect (i.e., statutory). These can be updated with GAT and EDQ data (see Appendix A). A review of the summary table included is to be undertaken to assign what areas and capacity is to be included in the baseline model and alternate scenarios. Current information made available from Economic Development Queensland (EDQ) and the Growth areas Taskforce (GAT) can assist with updating the land supply data input into the MULTI land supply module.

Feedback from the review team is sought to include or exclude growth areas from the base scenarios and alternate scenarios. Feedback is also sought about the commencement date of growth areas which may commence earlier than anticipated, or take up rates may increase, from catalytic infrastructure or other policy directions.

MEMORANDUM #6

FROM: Nicholas Patorniti

TO: Malcolm Griffin, Andre Brits, Lauren Mudd, Emma Tremble, Sherry She, Michelle Cottrell

DATE: 30 June 2023

SUBJECT: Alternate scenario supply additions to the base case.

Context: Many land use and infrastructure planning projects are underway but are yet to be included in the statutory planning framework (e.g., regional plan and local planning schemes including Part 4 LGIP planning assumptions and regional plans). These projects have not been included in the base case scenario model. This memo seeks to identify the projects, define their areas, and calculate their dwelling and employment addition. The results summarise the alternate scenario supply additions to the base case for an alternate model that more closely aligns with the preferred settlement pattern measures.

Generally, **the base case model supply used** council's land supply data and the LSDM 2022 current intent to service layer (with the incorporation of Caboolture West NDP1 in 2031). Some UUF Council land supply data was excluded where considered substantially constrained by GAT. Further, QGSO approval information was used to override Council data where there was an approval for a higher number of dwellings. Table 1 provides a summary of the **differences between base case and alternate scenario supply**. Table 2 summarises the **additional dwelling and employment supply** to the base case.

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	Item	Base Case	Alternate Scenario V1	Alternate Scenario V2	Alternate Scenario V3
1	Min. density around high demand SA2 (cat1-2) Activity Centres	No	Yes	Yes	Yes
2.0	High Frequency Transit outside centres in high demand SA2s (cat1-2)	No	Yes	Yes	Yes
2.1	SCC Mass Transit (stage 1 M'dore – Kawana)	No	Yes	Yes	Yes
3	Low Density Zone Gentle Density	No	Yes	Yes	Yes
4	GCC Light Rail (stage 3-4 Broadbeach – Coolangatta)	No	No	Yes	Yes
5	Beerwah East MDA	No	Yes	Yes	Yes
6	Elimbah North	No	Yes	Yes	Yes
7	Pine Valley – Preliminary Approval (lend lease)	No	Yes	Yes	Yes
8	Southern Thornlands	No	Yes	Yes	Yes
9.0	Caboolture West Interim Structure Plan Area	No	Yes	Yes	Yes
9.1	Caboolture West Balance Area	No	Yes	Yes	Yes
9.2	Caboolture West NDP1	Yes	Yes	Yes	Yes
10	Elimbah East preliminary approval	No	No	No	Yes
11	MBRC Emerging Community outside CITS is included inside CITS	No	No	No	Yes
12	Toowoomba additional growth areas outside the Urban Footprint (yield without nth-sth corridor)	No	No	No	Yes
13	Scenic Rim additional growth area outside the Urban Footprint	No	No	No	Yes

Method: The method comprises the following main steps:

- 1) Identify projects The project team identified government land use and infrastructure planning projects that are underway.
- 2) Define project areas The project team provided details about the spatial extent of the areas (see Appendix A) which was then translated into GIS.
- Calculate dwellings in the base case scenario for each project area The dwelling assumptions from the base case scenario were summarized for each of the project areas.
- 4) Calculate the project yield addition from the base case scenario

s. 73(2) - Not relevant/ Out of scope

Page 108 redacted for the following reason: s. 73(2) - Not relevant/ Out of scope

Appendix A: Method of infill alternative scenario

ASC.1 – Principal and Major Centres minimum densities in and around centres

- 1. Identify the centre core (where the local planning scheme is zoned "centre") relative to the 52 identified principal and major activity centres in SEQ.
- 2. Categorise the 52 centre cores using a combination of the CENTYPE from the centroid layer and the ShapingSEQ Centre Type identified in *Table 1 A guide for minimum densities in and around centres*, page 44.
 - a. Principal regional activity centre
 - b. Major regional activity centre
 - c. Principal/major rural activity centre

Principal/major rural activity centres were excluded as their densities are determined by Local Government.

- 3. Using the Ultimate Supply input of the base scenario, summarise the Ultimate total dwellings and total hectare for the remaining principal and major regional activity centres as follows:
 - a. In or within 400m of the centre core
 - b. Within 400 800m of the centre core
- 4. Remove parcels zoned as non-urban from the areas captured in Step 3. Parcels zoned for non-urban land uses are more likely to be larger parcels with less assigned dwellings and could dilute the final dwelling densities. Non-urban zones excluded from this analysis include zones alike:
 - Agriculture,
 - Airbases/airports
 - Environmental management & conservation,
 - Open space,
 - Park,
 - Rural,
 - Rural residential,
 - Racecourses,
 - Showgrounds,
 - Sport and recreation,
 - Waterfront and marine
 - Special purposes (defence, transport infrastructure, utility services)

- 5. Utilise the PopDAM demand categories by SA2 to determine the Centres with highest demand. For Centres that are across multiple SA2s, determine the highest dwelling yield and choose that demand category for the Centre.
- 6. Prepare an annual dwelling growth for the Centre by utilising the annual Building Approvals per year by SA2. For Centres that are across multiple SA2s, determine the max dwelling growth of an SA2 and choose that as the annual dwelling growth category for the Centre.
- 7. Prepare an Ultimate dwelling density using the data from Step 2. Specifically, the Ultimate total dwellings and total hectares by the distance of the centre core categories.
- 8. Compare the Ultimate dwelling density to the minimum dwelling density targets identified in ShapingSEQ *Table 1 A guide for minimum densities in and around centres,* page 44.
 - a. Principal regional activity centre min.150dw/ha within 400m, min. 100dw/ha within 400m-800m.
 - b. Major regional activity centre min. 80dw/ha within 400m, min. 40dw/ha within 400m-800m.
- 9. Summarise the additional dwellings to be delivered for each centre to meet the minimum dwelling density targets.

ASC.2 – High Frequency Public Transport Network Stations – 2032

- 1. Merge the Future and Existing Public Transport Network Station (PTNS) centroid layers and tag the difference in the new layer.
- 2. To exclude PTNS within a Principal/Major Activity Centre Network, exclude PTNS within 100m of the Centre Core (where the local planning scheme is zoned "centre") and Centre Periphery areas (created in ASC.1).
- 3. For the remaining stations selected, extract parcels from the Ultimate Supply layer that are within 800m of the PTS centroid and tag the parcels according to the following distances from the PTNS:
 - a. 0m-200m
 - b. 200m-400m
 - c. 400-800m
- 4. Remove parcels zoned as non-urban from the areas captured in Step 3. Parcels zoned for non-urban land uses are more likely to be larger parcels with less assigned dwellings and could dilute the final dwelling densities. Non-urban zones excluded from this analysis include zones alike:
 - Agriculture,
 - Airbases/airports
 - Environmental management & conservation,
 - Open space,
 - Park,
 - Rural,
 - Rural residential,
 - Racecourses,
 - Showgrounds,
 - Sport and recreation,
 - Waterfront and marine
 - Special purposes (defence, transport infrastructure, utility services)
- 5. Categorise the remaining Ultimate Supply land parcels according to the relating PTNS name or PTNS cluster name and then calculate the areas of the parcels in hectares.

- 6. Prepare an Ultimate total dwelling density using the Ultimate attached and detached dwellings and total hectares by the distance from the PTNS and the PTNS/PTNS cluster name.
- 7. Identify each parcel by type (Bus and Rail) and compare the Ultimate dwelling density to the graduation of dwelling unit per hectare density targets for below:
 - a. BUS
 - i. 80 du/ha Within 200 meters
 - ii. 60 du/ha within 400 meters
 - iii. 40 du/ha Within 800 meters
 - b. RAIL
 - i. 150 du/ha within 200 meters
 - ii. 100 du/ha within 400 meters
 - iii. 50 du/ha Within 800 meters
- 8. Summarise the additional dwellings to be delivered for each centre to meet the minimum dwelling density targets.
- 9. Calculate the total ultimate dwellings for each parcel and add that percentage to the new alternative attached dwellings column.

ASC.3 – Low Density Residential Zone (Gentle Density)

- 1. Identify the centre core (where the local planning scheme is zoned "centre") relative to the 52 identified principal and major activity centres in SEQ.
- 2. Identify Ultimate Supply parcels that are zoned for Low density residential and General residential.
- 3. Add 10% of the ultimate total dwellings to the attached dwellings for parcels over 1000sqm in area