City of Joondalup

Building sustainable neighbourhoods

LIVEABILITY AND DIVERSITY FOR FUTURE GENERATIONS

Local Planning Strategy Review

Issue Paper 2

Issue Category: Liveability outcomes for infill housing

April 2024

Issue	Phase 2 Action
Infill development changing the established suburban character in infill areas.	No actions for phase 2. Further action to address this issue will be undertaken as part of the options development in Phase 3 including but not limited to potential character studies for various planning catchments, and development of the local planning strategy in Phase 4.

Investigations into character statements/studies for infill areas are best undertaken once a strategic approach for the allocation of density is endorsed at the end of Phase 3. Notwithstanding, the following section provides an overview of current development controls in place to consider existing and desired future character within infill areas, as well as opportunities for character to be further addressed through the planning framework.

Key Findings:

- The City's *Development in Housing Opportunity Areas Local Planning Policy* (HOALPP) includes objectives which require developments to ensure that the design of infill development remains consistent with the established streetscape character where the 'deemed to comply' development standard is not met.
- There is opportunity for the City to undertake character studies for particular infill areas and consider introducing additional development controls to ensure that new development is consistent with the identified existing, or future desired, streetscape character. it is noted that these types of provisions are typically implemented for heritage areas and can have implications for existing landowners and affordability of new dwellings.
- It is acknowledged that some established neighbourhoods in the City may benefit from new development, and that development controls can plan for desired future character.

Mechanisms currently in place:

The following sets out mechanisms currently in place to require new developments within infill areas to be made to be consistent with the established neighbourhood urban form and character.

Planning instrument	Development type	Summary of requirements
HOALPP	All development in a HOA at a higher density	One of the overall objectives of the HOALPP is to ensure that new development enhances and respects the desired character of the locality and provides a neighbourhood within which the residents can identify. The following sub-sections of the development standards within the HOALPP set out objectives requiring new developments in infill areas to remain consistent with the established streetscape character: 2. Urban Design – Lot Subdivision 4. Building Height 7. Resident Parking – Location

		It is noted that other sub-sections include objectives which require development to be complementary to the streetscape and to maximise residential amenity to the street through design features and urban form.

Opportunities to address issue further:

The following outlines potential options for additional planning controls relating to urban form and character for new developments within infill areas.

Planning instrument	Key Considerations
Local planning policy:	**A local planning policy could:** • Apply to a specific neighbourhood or area. • Apply more broadly to a specific type of infill area (i.e. train station precinct, shopping centre precinct, urban corridor precinct, suburban renewal precinct etc.) • Set out a character statement for the established area. • Distinguish between buildings in character areas that contribute to the integrity of the streetscape, and those which do not. • Set out objectives for the desired development character outcome for the precinct. • Set out development controls through a local planning policy which includes requirements to achieve objectives for the desired character outcome for the precinct. **Examples:** • City of Bayswater - Character Protection Areas Policy • City of Vincent – Character Area Guidelines Local Planning Policy **Other considerations:** • Neighbourhood character changes over time as building trends change and older dwelling stock is renewed through redevelopment. This occurs in both low and medium density contexts. • Neighbourhood character can be reflected in new developments by way of development controls around building height and scale, as well as built form/typology. • Provisions for specific character elements such as roof types, materials and colours are used primarily for identified heritage precincts. • Some established neighbourhoods in the City may benefit from new development where housing stock is run down or of a lower quality. • Development controls for new development can plan for desired future character. • Neighbourhood character is also established through public infrastructure and facilities such as road and footpath design, as well as light poles and street trees etc. which sits outside of the scope of a local planning strategy. • Investigations into the implementation of development controls to manage character change in infill areas should consider the need to ensure planning policy is not overly restrictive so to place burdensome restrictions on landowners that can have costly implications for residents who are looking to redevelop or modify their property.

Precinct Plan	**Precinct Plan could:** • Assess the established precinct's structural elements such as nodes of activity, movement network, public spaces, block and lot patterns, street layout, landscape features, existing heritage and other factors which contribute to the precincts significance, character, and sense of place. • Undertake heritage and/or character studies where the unique urban or architectural character is identified to inform the design response. • Establish a future vision for the precinct which explains how the precinct design will contribute to character and sense of place. • Where unique character or heritage is identified, implement development controls through the precinct structure plan which protects the established character of a precinct. **Other considerations:** • Precinct plans can be applied to activity centres, transport stations, urban corridors and mixed-use precincts. • Precinct structure plans are required to respond to guidance and outputs set out in State Planning Policy 7.2 – Precinct Design.

Recommendation:

It is recommended that the City explores neighbourhood character through community consultation and technical work undertaken in Phase 3 of the Local Planning Strategy review to inform key actions to be included within the Local Planning Strategy.

Issue	Phase 2 Action
Poor liveability and design outcomes for medium density housing.	Investigate actions currently being taken to address dwelling liveability in infill areas.

Key Findings:

- Established State and Local Government planning policies include provisions to ensure improved liveability outcomes for infill development within the City of Joondalup through minimum outdoor space, landscaped areas, habitable room sizes, ventilation and access to natural light requirements.
- The recently amended Residential Design Codes include provisions to ensure improved liveability outcomes for medium density developments.
- The City's Design Review Panel provides an additional layer of design scrutiny for larger scale infill developments.
- Options to amend provisions relating to liveability may have onflow effects to other design aspects for infill developments, including affordability.
- The recently amended R-Codes Volume 1 was modified to remove 'medium density' provisions for single houses in R30 and R40 areas due to affordability concerns. This indicates a reduced State Government appetite for additional modifications which may impact affordability.

Consultation outcomes reporting indicated concern in relation to liveability for new dwellings developed as infill housing in the City's medium density areas (HOA's). Specifically noted as having the greatest impacts on liveability were:

- Lack of outdoor space
- Small bedroom and living room sizes
- Lack of ventilation
- Lack of access to natural light

Mechanisms currently in place:

The below summarises the provisions included within relevant state and local planning policies which address liveability for infill development in infill areas (Housing Opportunity Areas).

Outdoor space:

Adequate outdoor living space contributes to the overall liveability of a dwelling as it provides private outdoor space for entertaining, leisure, gardening and connection to the outdoors.

Planning instrument	Development type	Summary of Requirements
R-Codes Vol 1 & HOALPP	• All single and grouped dwellings in HOAs. • Multiple dwellings in areas coded R60 and lower.	Provisions set out: • Minimum area and dimension requirements for outdoor living areas. • Accessibility to outdoor living areas from a living room/primary living space. • Minimum portion of outdoor living area without permanent roof cover.

R-Codes Vol 2 & HOALPP	Multiple dwellings in areas coded R80 and over.	Provisions set out: • Minimum area and dimension requirements for private open spaces/balconies. • Screening limitations to ensure adequate outlook from balconies and living spaces. • Integration of service equipment within private open space (e.g. A/C units) into design and not visible from the street.

Bedroom and living room sizes:

Minimum room dimensions and sizes for common habitable rooms such as bedrooms and living rooms results in improved liveability for dwellings wherein habitable spaces are functional and able to flexibly accommodate furniture and personal goods.

Planning instrument	Development type	Summary of Requirements
R-Codes Vol 1 - Part C R-Codes Vol 2 & HOALPP	All single, grouped & multiple dwellings in HOAs.	Provisions set out: • Minimum dimension requirements for habitable rooms. • Minimum area requirements for habitable rooms. • Minimum ceiling height requirements.

Ventilation:

Adequate ventilation improves the overall liveability of a dwelling as it allows for the capture and use of prevailing cool breezes through habitable spaces, resulting in improved air quality within the home and reduced reliance on mechanical ventilation methods such as air conditioners.

Planning instrument	Development type	Summary of Requirements
R-Codes Vol 1 - Part C R-Codes Vol 2 & HOALPP	All single, grouped & multiple dwellings in HOAs.	Provisions set out: • Requirements for operable windows to all rooms with the exclusion of storerooms. • Minimum openable area requirements for windows.

Access to natural light:

Access to natural light is important for liveability as it allows for improved comfort for internal living and outdoor living environments. Passive solar design allows for optimised solar gain in winter and protection from heat gain in summer.

Planning instrument	Development type	Summary of Requirements
R-Codes Vol 1 - Part C R-Codes Vol 2 & HOALPP	All single, grouped & multiple dwellings in HOAs.	Provisions set out: • Requirements for access to at least two hours of direct sunlight between 9am and 3pm on winter solstice for outdoor living areas and habitable rooms. • Restriction on use of lightwells or skylights as the primary source of daylight to habitable rooms. • Requirements for external shading devices to restrict direct light intrusion during summer months and allow direct light intrusion during winter months.

		• Minimum glass area requirements per floor area of habitable rooms. • Minimum un-obscured glazing requirements for windows.

Joondalup Design Review Panel:

Residential development proposals required to be referred to the Joondalup Design Review Panel are as follows:

- All multiple dwelling developments
- Grouped dwelling development of five or more dwellings.

The Joondalup Design Review Panel reviews proposals in the context of:

- The relevant planning framework
- The 10 design principles provided in *State Planning Policy 7: Design of the Built Environment*.

When considering applications on which recommendations have been made by the Joondalup Design Review Panel, the decision-maker is required to have due regard to that recommendation.

Opportunities to address issue further:

The following outlines policy and statutory considerations where further amendments/modification to the development provisions outlined above may be sought to further address issues concerning liveability and design of infill developments.

Category	Key considerations
Amend/replace liveability and design provisions through a local planning policy.	• Amendments to development provisions relating to liveability and design set out in the R-Codes Volumes 1 and 2 through a local planning policy may require WAPC approval. • The HOALPP currently replaces or modifies R-Code provisions for room sizes, ventilation and solar access. • The recently amended R-Codes Volume 1 includes provisions for room size, ventilation and solar access for medium density infill developments. • Any proposed modifications to the above provisions should be considered in the context of their impact on development affordability and the need to still allow for practical outcomes for smaller subdivided blocks. • It is noted that the State Government recently delayed the implementation of amendments to the R-Codes Volume 1, to pull back on onerous provisions which were considered to adversely impact on housing provision and affordability for single houses in R30 and R40 density codes.
Amend Joondalup Design Review Panel terms of reference.	• The terms of reference for the JDRP currently require infill developments of five or more grouped dwellings, and all multiple dwellings to be referred for review.

	• Amending the terms of reference to include a greater number, or all infill development applications would have significant impacts on resourcing, processing times for development applications and time/capacity implications for panel members. • Amending the terms of reference would have affordability implications for smaller development applications if the terms of reference were amended to include a greater proportion of infill developments.

Recommendation:

The City is required to review its local planning policies in relation to the recently amended R-Codes Volume 1 within the next 24 months. As such it is recommended that provisions relating to liveability are considered in relation to those set out in the R-Codes Vol 1 as part of this review process.

It is noted that the revised Local Planning Strategy document will include actions which relate to the further review or modifications of local planning policies to address issues identified. It is therefore considered that there will be additional opportunity for issues relating to liveability to be addressed further as a part of actions included in the revised Local Planning Strategy.

Issue	Phase 2 Action
Poor sustainability outcomes for medium density housing.	Investigate actions currently being taken to address sustainability in infill areas.

Key Findings:

- Established State and local government planning policies include provisions to ensure improved sustainability outcomes for infill development within the City of Joondalup through minimum landscaping and tree planting requirements and solar passive design requirements.
- The City of Joondalup would require WAPC approval to further amend provisions relating to landscaping, tree provision and solar passive design in the Residential Design Codes through a local planning policy, or through the local planning scheme.
- The recently amended Residential Design Codes include provisions to improve sustainability outcomes for medium density developments.
- Amendments to the National Construction Code will take additional steps to improve thermal performance and energy efficiency for new residential developments.
- There is opportunity for the City to provide incentives or requirements for environmentally sustainable design through the Local Planning Strategy. These should be considered in the context of housing affordability, should be tested with the community and development industry, and are subject to WAPC support.
- Other, non-planning approaches may be available to improve sustainability outcomes within infill housing, including financial incentives and community education.

Mechanisms currently in place:

Environmentally Sustainable Design

Environmentally sustainable design principles aim to improve the health and comfort of buildings for occupants whilst improving energy and resource efficiency of new dwellings.

Environmentally sustainable design principles include:

- Locating indoor and outdoor living and entertainment areas to the north, maximising access to winter sun and, with eaves, minimising summer sun.
- Renewable energy generation (including rooftop solar).
- Using water and energy efficient appliances.
- Placing windows and doors on opposite sides of the room to create good natural cross-ventilation.
- Using light coloured roofs and walls to reflect heat.
- Integration of landscaping and trees to provide shade and stormwater management, and to contribute to local biodiversity.

The table below summarises the provisions included within relevant State and local planning policies which address environmentally sustainable design for infill development in medium density areas (HOAs).

Planning instrument	Development type	Summary of requirements

HOALPP	All development in a HOA at the higher density code.	• Minimum landscaped area requirements. • Tree canopy and deep soil area requirements. • Solar passive design requirements (including northern aspect and cross ventilation).
R-Codes Vol 2	Multiple dwellings in areas coded R80 and over.	• Solar passive design requirements (including northern aspect and cross ventilation). • Energy efficiency requirements. • Water management and conservation requirements. • Tree canopy and deep soil area requirements.
Environmentally Sustainable Design Local Planning Policy	Residential, commercial and mixed-use buildings (excluding single and grouped dwellings).	While the policy sets out that applicable development applications must be accompanied by an Environmentally Sustainable Design Checklist, there are no requirements to implement any sustainability measures. The following sustainability measures are only *encouraged* through the policy: • Solar passive design • Sustainable building materials • Renewable energy technologies • Energy, water and material efficiency • Water-wise native gardens • Indoor air quality enhancement

In addition to the abovementioned planning instruments, the National Construction Code (ie. building legislation separate to planning frameworks) has recently been updated to improve energy efficiency requirements for new dwellings, which are considered through the building permit application process. Further information is provided below.

Energy Efficiency Requirements under the National Construction Code:

The 2022 edition of the National Construction Code (NCC 2022) was adopted in Western Australia on 1 May 2023, and will become the mandatory standard for new dwelling construction on 1 May 2025. The NCC 2022 raises the minimum level of thermal performance for new single houses, grouped dwellings and apartments from the equivalent of 6 stars to the equivalent of 7 stars under the Nationwide House Energy Rating Scheme (NatHERS). For the average new home, achieving a 7-star NatHERS rating may require elements such as better insulation, higher quality glazing, lighter roof and wall colours (to reduce heat gain), and solar passive building orientation.

NCC 2022 also requires consideration of the energy efficiency of appliances used in new homes and encourages on-site renewable energy systems (particularly rooftop solar). Together with the requirement for achieving a 7-star NatHERS rating, these changes will improve occupant comfort and amenity, and increase energy efficiency in new homes.

Opportunities to address issue further:

The following outlines potential options for additional planning mechanisms relating to sustainability outcomes for new developments within infill areas.

Category	Approaches	Key considerations
Incentives for environmentally sustainable design measures for new dwellings	Development concessions and/or bonuses (e.g. reduced open space or additional building height) may be included within the local planning scheme, or within an existing or new local planning policy	• Approval from the WAPC would be required for an amendment to the planning scheme, and may be required if amending the provisions of the Residential Design Codes through a local planning policy. • Consideration should be given to community and development industry views on potential development bonuses and concessions. • Consideration should be given to the existing and upcoming energy efficiency requirements under the National Construction Code.
	Reduced processing timeframes ('fast tracking') for development applications which incorporate environmentally sustainable design measures	• This approach would require sufficient resourcing to ensure development applications are processed within the advertised timeframes.
Minimum requirements for environmentally sustainable design measures for new dwellings	These requirements could be included within the local planning scheme, or within an existing or new local planning policy	• Sustainability requirements could be implemented on a sliding scale, with fewer requirements for smaller dwellings and greater requirements for larger dwellings. • Approval from the WAPC would be required for an amendment to the planning scheme, and may be required if amending the provisions of the Residential Design Codes through a local planning policy. • Consideration should be given to the existing and upcoming energy efficiency requirements under the National Construction Code. • Consideration should be given to community and development industry views on which measures would be most feasible and cost-effective. • Impact on housing affordability to be considered. In light of the existing housing market and supply pressures currently being experienced, measures which are seen to be hindering housing supply and affordability are unlikely to be supported by the community or WAPC.

Outside of the planning system, the City may improve sustainability outcomes for new dwellings through the following measures:

- Financial incentives (e.g. grants/rebates or concessions on Council rates) for the incorporation of environmentally sustainable design measures within new dwellings. Consideration would need to be given to the resourcing implications of this approach.
- Community education. The City of Vincent, for example, provides extensive information on environmentally sustainable design on the City's website, including a video series exploring how to implement it for new buildings, as well as the associated occupant, owner and community benefits.

It is noted that the City provides a range of environmental publications on its website which provide information and guidance in relation to the following:

- Environmentally sustainable initiatives for the home in the 'Think Green Living Guide'.
- A self-assessment and guidance as to how to be more energy efficient in the home through the DIY Home Energy Audit.

Recommendation:

The City is required to review its local planning policies in relation to the recently amended R-Codes Volume 1 within the next 24 months. As such it is recommended that provisions relating to landscaping, tree canopy and solar passive design are considered in relation to those set out in the R-Codes Vol 1 as part of this review process.

It is noted that the revised Local Planning Strategy document will include actions which relate to the further review or modifications of local planning policies to address issues identified. It is therefore considered that there will be additional opportunity for issues relating to environmentally sustainable design to be addressed further as a part of actions included in the revised Local Planning Strategy.

Issue	Phase 2 Action
Loss of tree canopy in infill areas and resultant urban heat impacts.	• Investigate actions currently being taken to address urban tree canopy reduction. • Investigate planning mechanisms available to local government to support retention of tree canopy.

Key Findings:

- The City already undertakes a number of tree planting programs across the public realm, including the Leafy City Program, Winter Tree Planting Program and the Streetscape Enhancement Program.
- Tree protection is also considered for the private realm through the City's local planning framework, and through the State planning framework.
- For the private realm, changes to the local planning framework will be investigated to increase tree plantings, and to retain existing trees.
- Potential approaches for improving tree canopy on private land include expanding the City's significant tree register to include trees on private land, providing incentives and support for tree management, and introducing a requirement to obtain development approval to remove certain large trees on private land.
- Depending on the options being considered, high-level community and industry engagement may be required, as well as consideration of budgeting and resourcing matters. Some options will also require approval from the WAPC.

Benefits

The urban tree canopy provides a range of environmental and community benefits, including mitigating the urban heat island effect, mitigating and adapting to the effects of climate change, supporting biodiversity, and enhancing the green and leafy character of the City.

The protection and integration of the natural environment with the urban environment is a key element that contributes to the City's character and liveability. The City's *Local Planning Strategy* identifies the following as an objective: "*Protect and enhance the amenity and attractiveness of the suburbs, with emphasis on maintaining and improving streetscapes and recognising the important role trees play in the urban environment*". Community desire for more trees and greener spaces is also captured within the City's *Strategic Community Plan 2022-2032*.

Existing work being undertaken:

Tree planting on public land:

The City has a number of different programs which involve the planting of trees on public land. The table overleaf shows the contribution that each of these programs make to the overall planting of trees on public land within the City.

Planting location	Program name	Number of trees planted (2023)
Residential verges	Winter Tree Planting Program	596 (15%)
	Leafy City Program	1,677 (43%)
Parks	Playspace Renewals and Winter Tree Planting Program	737 (19%)
Road Reserves	Streetscape Enhancement Program	917 (23%)
TOTAL		**3,927**

Residential Verges – Winter Tree Planting Program:

Under the Winter Tree Planting Program, the City supplies and plants trees on residential verges free of charge at the request of the property owner. Upon request, one tree is allocated for a standard (non-corner) property, and up to three trees are allocated for a corner lot.

Residents can make a request for a tree through the City's website and can choose the species of tree from the City's Street Tree List. This voluntary program can be accessed by residents located both within and outside of HOAs.

Residential verges - Leafy City Program:

The Leafy City Program is a non-voluntary (no-opt-out) residential verge planting program. Suburbs receiving the Leafy City Program have been identified as 'hot-spots' via thermal mapping and tree-canopy surveying, with the selection of specific streets being supported by the advice of the City's arborist, landscape architects and civil engineers.

The number of trees planted under the Leafy City Program varies each year, depending on the size of the suburb, the configuration of footpaths and services, and the size of any HOA present. For instance, it is anticipated that approximately 2,000 trees will be planted under the *2023-24 Leafy City Program*, which is more than double those planted in 2021. Since the program was launched in 2017, over 4,500 new trees have been added to the City's residential verges.

One of the major benefits of the Leafy City Program is that the planting of trees within most residential verges on a street at the same time can create a consistent 'tree-boulevard' effect, which greatly improves the visual amenity of local streets once the trees are established.

At the November 2023 Council meeting, Council resolved to expand the Leafy City Program into HOAs, which had previously been excluded from the program.

Parks - Winter Tree Planting Program and Playspace Renewals:

The City has an ongoing annual program to assess where additional trees may be planted within parks. Tree planting for individual parks, including parks within HOAs, is undertaken as part of the Winter Tree Planting Program. Planting within parks can also occur during infrastructure projects, such as playspace renewals, if the existing tree canopy for that park is considered to be lacking.

The number of trees planted within parks varies annually based on the capacity of the Winter Tree Planting Program and number of infrastructure projects being undertaken.

Road reserves - Streetscape Enhancement Program:

Tree plantings for the City's major road reserves are provided through the Streetscape Enhancement Program. This program includes tree planting in non-residential verges, and both raised and street-level, painted median strips.

The planting of trees within street-level, painted medians is generally not desirable due to:

- limited space for root growth, and heat reflection from the road, which can lead to canopy development being stunted
- planting locations can be significantly limited by vehicle crossovers and requirements to maintain sightlines along the road.

Notwithstanding, where feasible, the planting of trees within street-level, painted medians in HOAs has largely been completed.

Cost for street tree removal:

The City has mechanisms in place to ensure that the full value of trees on public land is factored into any proposal to remove those trees (for example to facilitate a new vehicle crossover as part of an approved development).

Where a proposed development on private land involves the removal of a street tree, the applicant is required to not only pay the associated removal and replacement costs, but also pay for the amenity value of the tree calculated using the Helliwell Method.

The Helliwell Method is a globally recognised system which calculates a financial amenity value of the tree using a number of criteria including its life expectancy, tree size, rarity, importance in the landscape and the presence of other trees.

Significant Tree Register:

The City maintains a Significant Tree Register for trees (including individual trees, a stand of trees, or an avenue of trees) on land owned or managed by the City. Members of the community can nominate trees for inclusion on the register and the City will review those nominations against certain criteria. Trees may be considered for inclusion in the register based on their visual/aesthetic, botanic/scientific, ecological and historical/ commemorative/cultural and social value. Where trees are placed on the register, the City will prepare a tree management plan and monitor the trees to ensure their ongoing health.

There are currently 12 significant tree locations on the City's Significant Tree Register, all located on public land.

Planting of street trees as part of development approval:

In accordance with the City's *Development in Housing Opportunity Areas Local Planning Policy*, development proposals for single houses, grouped dwellings and multiple dwellings are required to include the planting of one street tree on the adjacent verge for every 10 metres of lot frontage. The tree is to be shown on the development plans, and a condition of approval is imposed requiring the tree to be planted and maintained to the City's specifications.

Tree planting on private land:

State and local planning framework:

The R-Codes Volumes 1 and 2 have been reviewed and updated in recent years to better protect and enhance the urban tree canopy.

The City's local planning framework, including the *Development in Housing Opportunity Areas Local Planning Policy*, also provides requirements relating to trees on private land.

Amendments to the Residential Design Codes has also included provisions for tree canopy provision. These provisions will continue to be replaced by the tree planting requirements in the HOALPP for a 24-month period, during which time the City will undertake a review of its policies in relation to the recently amended Residential Design Codes.

The table below summarises the requirements relating to tree canopy within the State and local planning framework.

Planning instrument	Development type	Tree requirement
R-Codes Volume 1	All single houses and grouped dwellings	• Minimum number of trees to be planted per dwelling, and in communal parking areas. • Retention of trees in communal open space (where provided).
	Apartments/multiple dwellings within areas of less than R60	• Minimum number of trees to be planted based on site area. • Retention of trees in communal open space (where provided).
R-Codes Volume 2	Apartments/multiple dwellings within areas R80 or higher	• Trees meeting certain criteria to be retained. • Minimum number and size of trees required to be planted or retained based on site area. • Deep soil area can be reduced where an existing tree is retained.
Development in Housing Opportunity Areas Local Planning Policy	All single houses, grouped dwellings and apartments/multiple dwellings within HOAs developed at higher density code	• Minimum percentage of site to be landscaped. • Minimum number and size of trees to be planted or retained based on size of landscape area. • Additional trees to be planted in verge.

Trees required as per the above are to be shown on the development plans, and a condition of approval is imposed requiring the tree/s to be planted and maintained to the City's specifications.

Opportunities for increasing tree canopy:

A report was presented to the November 2023 Council meeting which outlined the existing approaches to protecting and expanding tree canopy within the City (noted above), as well as potential approaches to further protect and expand the City's tree canopy. Council resolved as follows:

1 NOTES that the City will continue to promote awareness of the Winter Tree Planting Program;

2 *SUPPORTS the inclusion of Housing Opportunity Areas within the Leafy City program, noting that this will be undertaken within current budgets and resources;*

3 *REQUESTS the Chief Executive Officer to investigate the following as part of the review of the City's Local Planning Strategy and Local Planning Scheme No.3:*

3.1 expanding the City's existing significant tree register to include trees on private land; and

3.2 possible incentives and support for tree management on private land;

3.3 additional controls for the retention of mature trees, in particular hollowed trees.

The matters for further investigation as part of the City's Local Planning Strategy and Local Planning Scheme No.3 (Resolution 3) are discussed further below.

Approaches	**Key considerations**
Expanding the City's existing Significant Tree Register to include trees on private land. This approach would require a scheme amendment to establish the requirement to obtain development approval to remove a tree listed on the register. A local planning policy may also be prepared to guide the assessment of development applications received for the removal of trees listed on the register. Incentives could also be offered to landowners who have a listed tree on their property.	This is the WAPC's preferred approach to tree retention on private land. While some local governments with a significant tree register require consent from the affected landowner for a tree to be nominated and placed on the list, others allow nominations to be made and considered without landowner consent. While significant tree registers can play an important role in telling the social and cultural story of a local area, it is not considered that this approach by itself would have a significant impact on tree retention on private land. Consideration should be given to: • Preparedness by, and capacity of, the City to undertake compliance action against landowners, including the possible imposition of financial penalties, where a tree on the significant tree register is removed without development approval having first been obtained. • Sufficient engagement with the community to ensure that landowners are aware of their obligations to obtain development approval to remove a tree listed on the significant tree register. Even with an effective engagement approach, compliance action against landowners for removing a tree, which they can currently do without development approval, may not be well received by the community. • The potential increase in development applications associated with this option. Additional resources may be required to support this increased application load, including undertaking compliance action where required.
Incentives and support for tree management. Examples include: • Development concessions and bonuses (e.g. increased building height);	• Criteria would need to be established to determine which trees would be eligible for such incentives and support (e.g. trees on the significant tree register, or large canopy trees meeting certain size criteria).

Approaches	Key considerations
• Maintenance support (e.g. additional green verge collections); and • Financial incentives (e.g. concessions on Council rates).	• Approval may be required from the Western Australian Planning Commission if amending the provisions of the Residential Design Codes through a local planning policy. • Consideration should be given to community and development industry views on potential development bonuses and concessions (e.g. increased building height). • The City would need to provide resourcing to deliver financial incentives or additional tree maintenance support.
Additional controls for the retention of mature trees on private land. This could involve: • Developing of a set of broad tree criteria (for example canopy diameter, tree height and/or trunk size, trees with hollows); and • Establishing the requirement to obtain development approval to remove trees on private land meeting the criteria. Incentives could also be offered to landowners who have a tree meeting the established criteria.	This approach would be a significant departure from the existing planning framework. The City of Nedlands progressed a scheme amendment to implement this approach and it was not supported by the Minister for Planning. The Western Australian Local Government Association (WALGA) has prepared a model local planning policy to facilitate this approach. Consideration should be given to: • Preparedness by, and capacity of, the City to undertake compliance action against landowners, including the possible imposition of financial penalties, where a tree meeting the specified criteria is removed without development approval having first been obtained. • Sufficient engagement with the community to ensure that landowners are aware of their obligations to obtain development approval to remove a tree meeting the specified criteria. Even with an effective engagement approach, compliance action against landowners for removing a tree, which they can currently do without development approval, may not be well received by the community. • This option would likely lead to an increase in development applications being received. Additional resources may be required to support this increased application load.

Recommendation:

It is recommended that the actions outlined as part of Council's resolution be further investigated and/or implemented through actions included as part of the revised Local Planning Strategy.

Issue	Phase 2 Action
Increased on-street parking in infill areas.	Investigate parking issues and options relevant to medium density infill areas

Key Findings:

- Minimum parking requirements for new developments in the City of Joondalup are set out through relevant state and local planning policies.
- WAPC approval is required to amend parking standards set out in the Residential Design Codes.
- Options to reduce the potential impacts of on-street parking in infill areas may have additional cost, amenity and environmental implications.

Consultation outcomes reporting indicated the following issues in relation to increased on-street parking in infill areas.

- On-street parking is often the result of inadequate onsite parking provision for infill developments.
- On-street parking results in compromised safety for road users and pedestrians.

Mechanisms currently in Place:

The following sets out relevant parking standards which currently apply to the City's medium density infill areas through the *Residential Design Codes* (R-Codes) and the *Development in Housing Opportunity Areas Local Planning Policy* (HOALPP).

The following provides relevant definitions:

Definitions	
Location A (inside HOAs)	Resident parking ratios shall be in accordance with Location A (SPP 7.2) where: a. Development is within an 800 metre walkable catchment of a train station within or adjacent to a HOA. b. Development is within a 200 metre walkable catchment of a high frequency bus stop.
Location B	Includes all land that is not within Location A.
High frequency	A public transport route with timed stops that runs a service at least every 15 minutes during week day peak periods (7 to 9am and 5 to 7pm).

The tables below summarise the requirements for residential and visitor parking within the State and local planning framework for housing developed within medium density infill areas (HOAs).

The City requires WAPC approval to modify any parking standards through a local planning policy or scheme provision.

Residential Parking:

<table>
<tr><th>Planning instrument</th><th>Development type</th><th>On-site residential parking requirement</th></tr>
<tr><td>R-Codes Vol 1 & HOALPP</td><td>Single houses, grouped dwellings, Aged persons dwellings and ancillary dwellings, Multiple dwellings within areas coded R60 or less</td><td>
Minimum car parking requirements:
<table>
<tr><th>Location A</th><th>Minimum parking space(s) (per dwelling)</th></tr>
<tr><td>Ancillary dwelling</td><td>0</td></tr>
<tr><td>Studio and 1 bedroom dwelling</td><td>0</td></tr>
<tr><td>2 bedroom dwelling</td><td>0</td></tr>
<tr><td>3+ bedroom dwelling</td><td>1</td></tr>
<tr><th>Location B</th><th>Minimum parking space(s) (per dwelling)</th></tr>
<tr><td>Ancillary dwelling</td><td>0</td></tr>
<tr><td>Studio and 1 bedroom dwelling</td><td>1</td></tr>
<tr><td>2 bedroom dwelling</td><td>1</td></tr>
<tr><td>3+ bedroom dwelling</td><td>1</td></tr>
</table>
Minimum parking applies to all types of parking on site.

Maximum car parking requirements:
<table>
<tr><th>Location A</th><th>Maximum garage and carport parking (per dwelling)</th></tr>
<tr><td>Ancillary dwelling</td><td>1</td></tr>
<tr><td>Studio and 1 bedroom dwelling</td><td>1</td></tr>
<tr><td>2 bedroom dwelling</td><td>2</td></tr>
<tr><td>3+ bedroom dwelling</td><td>2</td></tr>
<tr><th>Location B</th><th>Maximum garage and carport parking (per dwelling)</th></tr>
<tr><td>Ancillary dwelling</td><td>1</td></tr>
<tr><td>Studio and 1 bedroom dwelling</td><td>1</td></tr>
<tr><td>2 bedroom dwelling</td><td>2</td></tr>
<tr><td>3+ bedroom dwelling</td><td>2</td></tr>
</table>
Maximum carparking applies to garages and carports. Additional parking can be provided as uncovered spaces, undercroft or basement parking.
</td></tr>
<tr><td>R-Codes Vol 2 & HOALPP</td><td>Multiple dwellings within areas coded R80 and above</td><td>
Minimum car parking requirements:
<table>
<tr><th colspan="2">Parking types</th><th>Location A</th><th>Location B</th></tr>
<tr><td rowspan="3">Car parking[1]</td><td>1 bedroom dwellings</td><td>0.75 bay per dwelling</td><td>1 bay per dwelling</td></tr>
<tr><td>2+ bedroom dwellings</td><td>1 bay per dwelling</td><td>1.25 bays per dwelling</td></tr>
<tr><td>Visitor</td><td colspan="2">1 bay per four dwellings up to 12 dwellings
1 bay per eight dwellings for the 13th dwelling and above</td></tr>
<tr><td rowspan="2">Bicycle parking[1]</td><td>Resident</td><td colspan="2">0.5 space per dwelling</td></tr>
<tr><td>Visitor</td><td colspan="2">1 space per 10 dwellings</td></tr>
<tr><td>Motorcycle/ Scooter</td><td colspan="3">Developments exceeding 20 dwellings provide 1 motorcycle/scooter space for every 10 car bays</td></tr>
</table>
</td></tr>
</table>

Visitor Parking:

<table>
<tr><th>Planning instrument</th><th>Development type</th><th>On-site visitor parking requirement</th></tr>
<tr><td>R-Codes Vol 1 & HOALPP</td><td>Single houses, grouped and multiple dwellings within areas coded R60 or less</td><td>Minimum visitor parking requirements:
<table>
<tr><th>Number of dwellings</th><th>Minimum Parking</th></tr>
<tr><td>0-4 dwellings</td><td>No visitor car parking required</td></tr>
<tr><td>5-8 dwellings</td><td>1</td></tr>
<tr><td>9-12 dwellings</td><td>2</td></tr>
<tr><td>13 or more dwellings</td><td>3, plus 1 additional space per four dwellings or part thereof</td></tr>
</table>
HOALPP requires garages to be set back 5.5m from the street boundary to allow for informal visitor parking on site.</td></tr>
<tr><td>R-Codes Vol 2</td><td>Multiple dwellings within areas coded R80 and above</td><td>Minimum visitor bay requirements:
<table>
<tr><th colspan="2">Parking types</th><th>Location A</th><th>Location B</th></tr>
<tr><td rowspan="3">Car parking[1]</td><td>1 bedroom dwellings</td><td>0.75 bay per dwelling</td><td>1 bay per dwelling</td></tr>
<tr><td>2+ bedroom dwellings</td><td>1 bay per dwelling</td><td>1.25 bays per dwelling</td></tr>
<tr><td>Visitor</td><td colspan="2">1 bay per four dwellings up to 12 dwellings
1 bay per eight dwellings for the 13th dwelling and above</td></tr>
</table></td></tr>
</table>

Opportunities to address issue further:

The following outlines opportunities for the City to further address on-street parking as a result of infill development.

Category	Approaches	Key considerations
Local planning policy	• Increased visitor parking requirements • Increased residential vehicle parking requirements.	• WAPC approval required to modify R-Codes – previous proposals to increase onsite parking have not been supported. • Requirements for additional visitor or residential parking bays on site compromises space on the lot for living/open space/landscaping or requires additional height allowances to compensate for lost ground floor area to parking. • Additional building height can have implications for neighbouring amenity and affordability.
Infrastructure upgrades in infill areas	• Street upgrades to include formalised visitor parking bays in verges.	• Has resourcing implications. • Has cost implications. • Reduction in verge landscaped area. • Potentially inequitable as not all sites can accommodate verge parking. • Was implemented previously and did not meet community expectations.
Parking compliance	• Street parking restrictions in infill areas.	• Has resourcing implications. • Has cost implications.

	• Residential permit requirement for street parking in infill areas.	• Parking restrictions would impact established landowners within infill areas.
Typology restrictions	• Through the application of density codes and policy provisions, the City can limit certain types of dwellings in street typologies wherein the nature of the street, and lots means on street parking creates greater issues for movement and safety. • E.g. restricting multiple dwellings in cul-de-sacs.	• Has implications for the total yield of additional dwellings the City will achieve through its local planning strategy. • Down-coding of lots would mean the need for upcoding elsewhere to demonstrate capacity. • The HOALPP and scheme provisions currently provide restrictions for multiple dwellings to be developed in certain locations.

Recommendation:

The City is required to review its local planning policies in relation to the recently amended R-Codes Volume 1 within the next 24 months. As such it is recommended that provisions relating to car parking are considered in relation to those set out in the R-Codes Vol 1 as part of this review process.

It is noted that the revised Local Planning Strategy document will include actions which relate to the further review or modifications of local planning policies to address issues identified. It is therefore considered that there will be additional opportunity for issues relating to parking to be addressed further as a part of actions included in the revised Local Planning Strategy. This is also recommended as parking provision requirements will be dependent on the strategic approach to the allocation of density and housing typologies which is endorsed following Phase 3.

Issue	Phase 2 Action
Amenity impacts of infill developments on adjoining properties.	Investigate actions currently being taken to address impacts of transitional density change in infill areas.

Key Findings:

- Measures to address potential amenity impacts from adjoining developments are set out in the Residential Design Codes and local planning policies.
- Neighbouring amenity is mostly impacted by overlooking, overshadowing and building bulk.
- The HOALPP and in the case of overshadowing, the City's local planning scheme, modifies the Residential Design Codes with the intent of reducing amenity impacts on adjoining neighbours, where a lot is developed to a higher density.
- WAPC approval is required to further modify provisions relating to overlooking and overshadowing.

Consultation outcomes reporting indicated concern in relation to adverse impacts of infill developments on adjoining established low density dwellings. Specifically noted as having the greatest impacts on amenity were:

- Overlooking/loss of privacy
- Overshadowing
- Impact of building bulk

Mechanisms currently in place:

The tables below summarise the provisions included within relevant state and local planning policies which act to minimise overlooking/loss of privacy for infill development in medium density areas (HOAs).

Overlooking/loss of privacy:

The R-Codes set out provisions which aim to limit overlooking from upper floor bedroom and living room windows, as well as balconies and elevated outdoor living areas. The R-Codes acknowledges that these provisions are not intended to completely restrict overlooking, however it aims to protect visual privacy to as much as reasonably practicable in an urban context.

Planning instrument	Development provision	Summary of requirements
R-Codes Vol 1 R-Codes Vol 2	Setback requirements for windows	• Minimum 'cone of vision' setbacks to lot boundaries from major openings (windows to bedrooms, living rooms and studies etc.). • Cone of vision radius is dependent on the applicable density code of the adjoining lot.

	Setback requirements for unenclosed outdoor active habitable spaces	• Minimum 'cone of vision' setbacks to side boundaries from unenclosed outdoor active habitable spaces (balconies, elevated decks etc.)
	Window screening requirements	• Minimum screening height requirements where setbacks are not able to be met. • Minimum screening material and obscurity standards.
	Where adjoining lots are developed at a lower density, setbacks are determined by reference to the lower density code.	

Overshadowing:

The R-Codes, the HOALPP and Local Planning Scheme No. 3 set out provisions to limit excessive overshadowing to neighbouring properties as a result of development.

Planning instrument	Development provision	Summary of requirements
R-Codes Vol 1 R-Codes Vol 2 & HOALPP	Maximum overshadowing standards	• Maximum percentage of adjoining sight area overshadowing requirements per the development intensity of the affected property. • Consideration for maximum proportionate overshadowing where a development site shares its southern boundary with a lot and the lot is bound to the north by another lot.

Impact of building bulk:

The R-Codes and HOALPP set out provisions to manage the bulk of developments through minimum street and side and rear building setback requirements, maximum building height requirements, maximum site fill requirements and maximum plot ratio requirements for multiple dwellings. These tools can be used to ensure that bulk impacts on adjoining properties are managed appropriately while not being overly burdensome to develop housing on a site.

Planning instrument	Development provision	Summary of requirements
HOALPP	Street setbacks	• Minimum and average setbacks to the street.
R-Codes Vol 1 R-Codes Vol 2 & HOALPP	Side and rear setbacks	• Minimum side and rear setbacks for ground and upper floors. • Maximum boundary wall length. • Maximum and average boundary wall height. • Exemption for walls over these dimensions where they abut another wall of similar proportions
HOALPP	Building height	• Sets maximum building height of two storeys.

R-Codes Vol 1	Site works	• Maximum levels of fill within a site. • Building setbacks take level of fill into consideration when calculating wall height.
R-Codes Vol 2	Plot ratio	• Sets maximum allowable volume of development within a building envelope. • Applies to multiple dwellings only.

Opportunities to address issues further:

The following outlines policy and statutory considerations where further amendments/modification to the development provisions outlined above may be sought to further address issues concerning amenity impacts from infill developments.

Category	Key considerations
Overlooking/loss of privacy	• Development controls which manage overlooking/loss of privacy are set out in the R-Codes Volumes 1 and 2 and require WAPC approval for the City to modify the requirements through a local planning policy. • The intent of overlooking provisions within the R-Codes is not to completely prevent all overlooking as it is recognised that this is not practicable within an urban context. • Any proposed modification would need to consider the impact on design and development viability for new developments, particularly in urban areas where prevention of overlooking completely is not practically achievable.
Overshadowing	• Development controls which manage overshadowing are set out in the R-Codes Volumes 1 and 2 and require WAPC approval for the City to modify or replace requirements through a local planning policy. • These requirements are already modified through the HOALPP to provide stronger restrictions regarding overshadowing for new developments in HOAs. • Any proposed modification would need to consider the impact on design and development viability for new developments, particularly in light of the development of smaller lots where two-storey development options may be the only way to achieve a liveable development outcome. • In application the more restrictive requirements currently set out in the HOALPP and the Local Planning Scheme have been noted to be overly restrictive for development on narrow east/west facing lots.
Impact of building bulk	• Development controls which manage street setbacks, lot boundary setbacks, building height and site works can be amended or replaced through a local planning policy without requiring WAPC approval. • Currently the HOALPP replaces or modifies R-Code provisions for lot boundary setbacks and building height for infill development occurring in HOAs to manage impact on adjoining properties. • Opportunity remains for the City to further modify these provisions through future amendments to the HOALPP or through the introduction of a new Local Planning Policy. • Any proposed modifications to the above provisions should be considered in the context of their impact on development viability and the need to still allow for liveable outcomes for smaller subdivided blocks.

Recommendation:

The City is required to review its local planning policies in relation to the recently amended R-Codes Volume 1 within the next 24 months. As such it is recommended that provisions relating to neighbouring amenity are considered in relation to those set out in the R-Codes Vol 1 as part of this review process.

It is noted that the revised Local Planning Strategy document will include actions which relate to the further review or modifications of local planning policies to address issues identified. It is therefore considered that there will be additional opportunity for issues relating to neighbouring amenity to be addressed further as a part of actions included in the revised Local Planning Strategy. This is also recommended as elements such as lot boundary setbacks and building heights will be dependent on the strategic approach to the allocation of density and housing typologies which is endorsed following Phase 3.

Issue	Phase 2 Action
Capacity of established infrastructure to service population growth due to infill development.	• Review and synthesise existing projects being undertaken by the City regarding infrastructure and service provision to understand how the City is planning for delivery of community, transport and other infrastructure. • Engage with service providers to seek preliminary information on potential capacity issues for various infrastructure portfolios.

Key Findings:

- State government service providers forward plan for future infrastructure provision as population densities increase within established urban areas as a result of infill development.
- Service provider bodies are generally guided by strategic planning documents and demand modelling as uptake of density occurs over time.
- The City has a number of strategic plans and initiatives to address infrastructure provision to cater for the City's growing population.
- A Local Planning Strategy is a land use planning instrument, and is therefore limited in its ability to affect the delivery and provision of infrastructure projects. It can however be guided in its strategic aspirations by established and future planning for transport, social and service infrastructure.

Consultation outcomes reporting indicated concern in relation to the capacity of existing infrastructure to cater to population growth as a result of infill development. This included concern in relation to:

- The capacity of the established road network and public transport network to accommodate additional trips/usage.
- The capacity of established community infrastructure such as schools, main roads, water, power etc.
- The provision of social infrastructure such as parks, community facilities and other public spaces.
- The provision of sustainable transport infrastructure.
- The provision of improved state and local government transport infrastructure.

State Government service providers:

The following sets a summary of how different state government service providers plan for future service and infrastructure provision in established urban areas where residential densities are likely to increase. This information was ascertained following engagement with the below service providers.

Service Provider	Future planning for infrastructure
ATCO Gas	• ATCO conducts capacity modelling annually for the gas network to ensure gas availability for future growth. • ATCO refers to developer masterplans for new growth areas or historical growth in an area as input to modelling. Where large developments are proposed, ATCO will work with Councils and developers to future plan for the gas network to support growth in demand. • Through annual capacity modelling of the gas network, ATCO identifies areas for reinforcement via different options such as new gas regulating station, new pipelines or pressure increases to ensure gas availability for current and future gas users. • ATCO Gas' Sustainability Strategy sets out sustainability considerations in planning and development of future gas infrastructure.
Department of Education	• Strategic planning for school sites is guided by Operational Policy 2.4 – Planning for School Sites (OP2.4) which was developed by the WAPC in partnership with the Department of Education. • OP2.4 considers demand for school sites in the planning and design of land for residential purposes. This includes setting of general provisions for the number of school sites to be applied per number of dwellings in a locality. This takes into consideration the existing number of public, private and independent schools within a particular location. • OP2.4 sets out the need to ensure that strategic planning for residential purposes is done in consultation with both government and non-government education providers in order to assess the need for additional primary school infrastructure.
Infrastructure WA	• Infrastructure WA (IWA) provides advice to Government on strategic infrastructure matters, primarily through the State Infrastructure Strategy. • IWA reviews relevant agencies' strategic asset plans on an annual basis, to support improved long-term public infrastructure planning. • IWA provides advice to the government annually to support the preparation of the 10-year State Infrastructure Program. This advice includes IWA's assessment of the priority infrastructure needs at a state/regional level over the mid-term, based on information provided in agencies strategic asset plans and other relevant data.
Main Roads WA	• Main Roads completes strategic-level modeling to forecast future road network volumes using land use information sourced from the Department of Planning, Lands, and Heritage (DPLH). This information would capture residential land use densities included as part of approved local planning strategies. • Main Roads relies on DPLH land use information as well as district, and local structure plans, to identify future infill housing figures, population, and employment data, to consider the required capacity of the high-order road network. • Main Roads also considers current and future local road network expansion plans when considering where capacity building may be required as a result of infill development.

Public Transport Authority	• The PTA maintains a Rail Growth Plan (RGP) which outlines a strategic approach to meet forecast demand through to 2051. In developing the RGP, forecast patronage was determined using the Strategic Transport Evaluation Model (STEM) in conjunction with a detailed station-level analysis incorporating real-life PTA SmartRider data. • The PTA also focuses on sections of the rail network that provide a higher level of service such as the Whitfords-Cockburn Shuttle service which provides a five-minute frequency during the peak periods. It is anticipated that the service frequency will increase in the future with new supporting infrastructure known as High-Capacity Signalling. • Further, the PTA follows the Station Access Mode Hierarchy which prioritizes access for pedestrians, cyclists, bus users and driving. Planning new stations, and upgrading existing stations, follows this framework to ensure people can access public transport easily, sustainably and safely into the future. • The PTA also maintains a Service Development Plan for bus network which contains a list of projects including frequency upgrades to existing bus services. • With regard to bus service planning, the PTA draws upon Local Government planning strategies and structure planning to inform the Service Development Plan. However, with respect to increased demand from infill housing, PTA is responsive to patronage in determining whether additional capacity is required. However, the timing of introducing frequency upgrades is determined by available funding and patronage. Further given the PTA operates an integrated network many bus routes are timed to connect with train services, therefore bus service frequencies are influenced by train line frequencies. • The PTA undertakes a disciplined and rigorous approach to making decisions about when and how it should invest in its network. The main goal of analysing potential investment solutions, whether qualitatively or quantitatively, is to assess which projects are likely to contribute the most to the public interest (i.e. which projects will maximise the return to the community for every dollar invested). The PTA follows its Project Management Framework and many supporting frameworks which help the PTA to make informed decisions around future planning, funding and delivery.
Water Corporation	• The Water Corporation undertakes modelling for water and sewer infrastructure based on information set out in strategic planning frameworks across Western Australia. • This modelling is used to identify where upgrades might be required to water and sewer infrastructure in future as development uptake in infill areas occurs. • Modelling is undertaken for an ultimate build out scenario based on strategic planning information and where upgrades are needed, they are included in Water Corporations capital program. • There is inherent additional capacity within the water and sewage infrastructure network to accommodate infill development, however this varies dependent on location.

	• As such any such changes proposed to density codes in the City of Joondalup will be subject to further review by and engagement with Water Corporation as the project progresses.
Western Power	• Western power utilises specific demand modelling to forecast demand over the next 10-year period. • Housing development is an input to this modelling, among others. • Forecasting is used to develop long term infrastructure plans for service the modelled demand. • Sources for data input includes future housing data ascertained from WALGA, amongst other federal and state government data sources as well as Australian Bureau of Statistics, Commonwealth Scientific and Industrial Research Organisation and Australian Energy Market Operator.

Local government infrastructure planning:

The following sets out plans and programs which guide how the City plans for and provides additional services and infrastructure provision as the population grows.

Plan/Program/Strategy	Future planning for infrastructure
Capital Works Program	• The annual Five-Year Capital Works program provides detailed information on the City's capital works projects planned over the next five years. These program areas include: o Parks Development o Foreshore and Natural Areas Management o Parks Equipment o Streetscape Enhancement o Local Road Traffic Management o Blackspot Program o Parking Facilities o Road Construction (including Bridges and Underpasses) o Pathways (New and Replacement) o Stormwater Drainage o Lighting (Street and Public Open Space) o Road Preservation and Rehabilitation o Building Construction Works o Major Projects • The Five-Year Capital Works Program has been developed to meet anticipated community infrastructure needs and the future development of the City with the strategic direction for the Program provided by the Strategic Community Plan 2022-23 and the 20 Year Strategic Financial Plan.
Major road network review	• The City uses annual State funding programs to apply for upgrading road sections and intersections to accommodate increased traffic growth along its higher order road network. In the past this process was completed as a result of reviewing traffic count data and in response to public enquiries regarding congestion and accessibility issues. • In 2018, the City commissioned ARUP to complete a body of work referred to as the Major Road Network Review (MRNR) which involved ARUP assessing the Level of Service of intersections along

	the City's major roads and suggesting improvements based on the Level of Service operations of those intersections. • Following this external work being completed, the City then reviewed the list of recommended projects and ranked the intersection upgrades in order to apply to have these intersections upgraded using the Main Roads WA Metropolitan Regional Road Grant (MRRG) Road Improvement program. • The MRRG program focusses primarily on upgrading roads and intersections experiencing congestion and access issues and allocated funding support to all Local Government on a 2/3 State vs 1/3 LG funding arrangement. Projects are given a score as part of the funding application process and then considered against other projects applied for by other local governments for funding consideration.
Active Transport Planning	• The City provides and maintains active transport networks, including pathways, cycle lanes and shared zones, to encourage active transport use. Supported with lighting and CCTV surveillance, the infrastructure helps to promote and support active transport options within the broader community. • The aim is to have a healthy and active community and reduce mobility-related carbon emissions in line with the State Government's *Bicycle Network Plan 2014–2031* and *Western Australian Cycling Network Hierarchy*. • The City promotes active transport options through community education and information on external funding opportunities that encourage the uptake and continued use in the community. • The City is not responsible for subsidising the cost of micromobility (e-scooters, e-bikes etc.) equipment or equipment used in active transport, such as clothing, helmets, safety pads, sunglasses or sunscreen.

Recommendation:

The review of the Local Planning Strategy will require continued engagement with State Government service providers as the project identifies a preferred strategic approach for the spatial allocation of density and prepares the new Local Planning Strategy document.

It is anticipated that once a preferred strategic approach to the allocation of density is confirmed through Phase 3, the City will undertake necessary technical studies to inform infrastructure provision where applicable. This is anticipated to include further engagement with State Government service providers, as well as undertaking studies such a transport impact assessment to consider the impacts of any changes to the spatial allocation of density on the local road network.

The project will continue to have input from the relevant technical experts within the City in relation to strategic land use planning to inform future infrastructure delivery through the capital works program to accommodate future population growth.

Issue	Phase 2 Action
Lack of developer contribution to neighbourhood improvement in infill areas.	Investigate issues and options for development contribution schemes for infill development

Key Findings:

- Development contribution plans are a tool through which developer contributions can be levied for community infrastructure where a need and nexus can be demonstrated as a result of population growth in particular areas.
- *State Planning Policy 3.6 – Infrastructure Contributions* provides guidance for the implementation of development contribution plans.
- The use of development contribution plans in an infill development context is problematic with issues related to the equity of cost sharing and timing uncertainty.
- Opportunities exist outside of development contribution plans to leverage additional community benefit through development controls and/or policy incentives.

Overview of Development Contribution Plans:

Infrastructure contributions may be levied by local governments under local planning schemes towards the cost of infrastructure necessary to accommodate urban growth.

Contributions for initial development infrastructure (e.g. roads, open space, schools, public utilities) are generally levied directly through the subdivision development process, or where cost-sharing arrangements are proposed, through a Development Contribution Plan (DCP).

A DCP is an arrangement between a local government and specified landowners to share the costs involved with delivering new infrastructure within a specified Development Contribution Area.

Contributions for community infrastructure (e.g. sporting and or community facilities) are generally levied through a DCP and need to be justified through a Community Infrastructure Plan. Contributions are for initial capital requirements only, and not for ongoing maintenance or operating costs of the infrastructure.

A DCP is traditionally used in large greenfield contexts where there are multiple landowners and formal coordination (and cost sharing) of the provision of infrastructure is required. As the City of Joondalup does not have any significant greenfield development sites that are not under a single ownership, the use of a DCP has not been required.

A DCP can also be applicable to infill settings, however have a number of constraints when applied within an infill context as outlined below.

State planning guidance for developer contributions:

The below provides an overview of state government planning guidance in relation to developer contributions and how they are able to be applied.

Planning instrument	Overview
State Planning Policy 3.6 – Infrastructure Contributions	• Policy provides a framework to ensure that infrastructure contributions systems are transparent, equitable and accountable. • Applies to all development settings in WA where new development results in demand for additional infrastructure, services and facilities. • Acknowledges a DCP may not be suitable for all development settings, where the rate of development may result in difficulties to realise the intended infrastructure within the life of the DCP. • Use of a DCP in urban infill areas should be given a degree of caution as growth rates are typically slow.

State Planning Policy 4.2 – Activity Centres
&
State Planning Policy 7.2 – Precinct Design
	• Policies provide a framework to guide the planning and development for the function, land use, access and urban form considerations for activity centres and their associated precinct structure plans.
	• Applies to activity centres set out in State Planning Policy 4.2 classified as Strategic, Secondary or District Centres.
	• In accordance with *SPP 7.2 – Precinct Design Guidelines*, precinct structure plans for activity centres should address the need generated by any increased population for additional:
	  ○ Public open space and recreations facilities
	  ○ Schools and other community facilities
	  ○ Transport and servicing infrastructure
	  ○ Affordable housing
	• It may be appropriate that a range of mechanisms are used to address some of this provision including development incentives and/or developer contributions.

Key Considerations for a DCP in an infill context:

Need and the nexus:

A DCP should clearly demonstrate the need for infrastructure (need) and the connection between the development and the demand created (nexus).

Contributions to a DCP for community infrastructure cannot exceed $5,000 per dwelling and all items are required to be justified with the demand demonstrated through a Community Infrastructure Plan.

A DCP may not be suitable in established metropolitan areas due to the difficulties in establishing the need and the nexus of additional infrastructure, or the uncertainty around the rate of growth and certainty regarding the timing of delivery of the infrastructure.

The City recently undertook a Social Needs Analysis to identify where there is need associated with social infrastructure and services in the City (e.g. playgrounds, public open space, organised sport facilities etc.). Social need was not specifically identified in relation to medium density infill areas in this report. This is likely due in part to the relatively slow uptake of infill development in HOAs (approximately 1,200 additional dwellings across all HOAs since 2011).

Equity of cost sharing for infill infrastructure:

Infrastructure contributions should be levied equitably from all identified stakeholders within a contribution area.

Established residential areas which are currently up-coded, or may be up-coded for increased density in future, provide the opportunity for landowners to redevelop sites at an increased density, however there is no obligation for a landowner to redevelop, and one or more sites may never be redeveloped.

This creates an equity issue for the cost sharing of infrastructure insofar that applying a DCP would result in either:

- A DCP that levies contributions only from landowners who are redeveloping their properties, however the infrastructure provided would benefit not only those redeveloping, but also those not developing.
- A DCP that levies a contribution from all landowners within an up-coded area thereby imposing a charge on landowners that are not redeveloping and not creating a demand for additional or upgraded infrastructure.

State Planning Policy 3.6 sets out the need for infrastructure contributions to be levied equitably from identified stakeholders within a contribution area, based on the relative contribution to need.

Timing and lifespan uncertainty:

A DCP is required to have a set lifespan as it is anticipated that a development or redevelopment will be completed within that period.

The current rate of uptake in infill areas is uncertain and differs by location given differing market factors. This makes it difficult to provide accuracy as to when an infrastructure item should be delivered to meet demand.

This could result in pre-funding infrastructure by the City before a correlating demand exists (if ever), or the delivery of infrastructure within an identified timeframe at a scale inconsistent with the ultimate demand.

Ensuring reasonable cost:

Infrastructure items funded through a DCP, and total cost of infrastructure contributions imposed, should be reasonable and align with the needs of the community and consider the impact on housing affordability.

As above, the City's Social Needs Analysis did not identify any significant need specifically for infill development areas.

Work currently undertaken by the City:

The City currently does not have any Development Contribution Plans in place for infill development areas, or any other development. Infrastructure in the City is provided through private land developers or as needed through the City's Capital Works Program.

Opportunities to leverage community benefit:

The following outlines opportunities for additional community benefit to be leveraged from development other than through a DCP.

Opportunity	Key Considerations
Incentive and performance-based provisions in local planning frameworks	• Provisions included a local planning framework through policy or scheme provisions which are linked to the delivery of broader community benefits, including infrastructure and public realm upgrades. • These would typically only be practicable for large scale developments where there is communal open space or public realm components to the development.
Use of rating mechanisms available under the Local Government Act 1995	• Application of specified area rates (SARs) can be applied to land which exhibits particular characteristics. • This would have equity and affordability implications for landowners in areas where SARs are applied. • SARs currently apply to designated areas within the City such as Iluka, Woodvale Waters, Burns Beach and Harbour Rise Estate. • SARs can be used to fund maintatenance and development of higher quality public facilities and infrastructure such as parks and footpaths. • The City is required to use the money from SARs for the purpose for which the rate is imposed and in the financial year in which it is imposed.

Recommendation:

Based on the above considerations and the historic slow uptake of infill development in medium density areas (HOAs), it is recommended that the City not consider a Development Contribution Plan for infill development areas.