6.1 Review Approach

The following recommendations for revisions to both the LEP and DCP support the urban structure and neighbourhood characters described in this report. Planning provisions based on urban design approach support urban regeneration by providing greater certainty for all stakeholders. The recommendation are based on detailed urban design testing to ensure the planning provision describe realistic building envelopes, which facilitate good design outcomes. Tested provisions ensure that the vision articulated in this study can be achieved and that future development expectations are understood by all.

LEP Provisions

PMHC Local Environmental Plan (LEP) includes statutory provisions governing the type and amount of development permissible on a site. The LEP specifically addresses:

- Zoning (Land Use) which establishes the permissible uses on a site
- Height of Buildings which limits the overall height, measured in metres, of a building on a site
- Floor space ratio (FSR) which establishes the amount of floor space that is permissible on a site in proportion to the site area.

Council's LEP is based on the NSW State Government Standard Instrument LEP, which standardises land use zones and established consistent definitions across the State for height of buildings and floor space.

DCP Guidelines

PMHC Development Control Plan includes development controls which shape the broader LEP provision in response to:

- local character place-specific considerations for building scale; frontage to streets and ground floor use and activation,
- amenity for neighbours, within the public realm, and within a development. This incudes consideration for privacy, view sharing, and outlook.
- environmental performance including access to light and air and the capacity for tree growth and stormwater management.

Site Testing

To confidently recommend revisions to the current planning provision, a site testing methodology was developed. Because the study area has a diversity of lot sizes, shapes and orientations, common lot types were identified to test their development capacity. Building envelopes and indicative parking layouts were prepared to assess the capacity of the current height and floor space to deliver realistic building forms for each site.

The community generally evaluates the appropriateness of development based on height and bulk, while the development industry establishes feasibility based on permissible floor space. It is important that building heights and FSR are coordinated to ensure all stakeholders are evaluating the same outcome. To ensure space is available within the building envelope height and depth, the building envelope floor space is discounted as 75% of the envelope area.

The building envelope testing considers:

- minimum lot sizes and amalgamation requirements
- building uses, i.e. residential dwellings, commercial suites, retail, parking
- street setbacks in relation to street character and ground floor uses
- side and rear setbacks in relation to neighbouring impacts and residential amenity; building separation (SEPP 65) and fire safety are also considered
- deep soil/landscaping in relation to building envelope and car park footprint
- building height in relation to neighbourhood character; the spatial definition of streets or areas within the broader urban structure; transition of height with adjacent areas; and residential amenity.
- floor space ratio in relation to the preferred building envelopes and height.

The testing of existing height and floor space ratios found a mismatch between the controls on some sites. Where the current FSR is too high for the permissible height, for example in the western part of Westport, redevelopment is not likely to occur as the FSR is not achievable. If redevelopment does occur, it is often poor, because of design strategies, such as deep floor plates and/or siting the buildings below the street level, are used to achieve the permissible FSR. Both scenarios result in poor apartment designs with compromised daylight and natural ventilation; awkward room layouts that may be difficult to furnish or use; and often negative impacts on neighbours or the streetscape.

Based on the initial site testing, recommendations for future building heights were made. These were also informed by the urban structure and the desired future

character. The recommended heights were then tested, using a variety of building types, against the achievable FSR. Building types were selected based on a desired street edge building form and the lot size to ensure the best development outcome. Refer to Section 2.8: Housing Types for examples of building types used.

The testing aimed for a loose fit between the height and the FSR to ensure space within the height for a future building to be modelled in response to site specific considerations or constraints. A loose fit supports more slenderer buildings and better articulated buildings. More space within the building envelope gives future building designs the capacity to address neighbouring privacy and solar access and to shape the perceived bulk/scale of a building.

Refer to Appendix A for testing of height and floor space recommendations.

6.2 LEP - Land Use Zones

In general, the three neighbourhoods are intended to be residential in character and use, with some minor supporting commercial uses. Gordon Street, a local centre, is the exception.

The zones within the study include:

R1 General Residential - this generally support all residential types with limited commercial use for home industries and shop top housing

R3 Medium Density Residential - this generally supports attached dwellings and multi-dwelling housing (such as villas and townhouses). Residential flat buildings are also permissible.

R4 High Density Residential - this generally supports residential flat buildings and specifically prohibits lower scale housing types, such as villas and townhouses. Limited commercial uses, such as neighbourhood shops and shop top housing (mixed use) are permissible as are home industries.

B2 Local Centre - this applies to Gordon Street and generally supports retail, business, entertainment and community uses that serve the local area and its visitor. Any residential uses are a component of shop top housing (mixed use).

There is strong desire by Council to reinforce its centre hierarchy by focusing commercial uses within the Port Macquarie and Settlement City Town Centres and the Gordon Street local centre.

Westport Neighbourhood

Current land use zones within the Westport Neighbourhood are predominantly R3 Medium Density to the north of Gordon Street with R4 High Density Residential along Hollingsworth and Buller Streets. These higher density residential uses reflect the areas proximity to the Port Macquarie Town Centre and Settlement City and the desire for tourist accommodation along Westport Park, the foreshore and Kooloonbung Creek.

Bisecting the Westport Precinct is Gordon Street, which is zoned B2 Local Centre and reflects its role within Council's centre's hierarchy and its nexus with the Port Macquarie and Settlement City Town Centres. The area to the south of Gordon Street is zoned R1 General Residential reflecting its existing suburban character and residential use. Recent development interests have requested that a broader range of uses be consider on lots to the rear of Gordon Street properties.

The current DCP supports Buller Street as a mixed-use street. The achievement of this objective is limited by existing development and the sub-arterial role of Buller Street. Existing strata titled apartment buildings have limited redevelopment potential, particularly on the eastern half of the street. The high use of Buller Street for vehicle access to the town centre limits opportunities to reconfigure the street for an improved streetscape and for on-street parking to support mixed use buildings. Although Buller Street has park frontage and some views to the river, it is not currently a pleasant street for cafe and restaurants uses.

This study has identified Gore Street as a focus for the Westport Neighbourhood. To promote it as a focus, some ground floor activation dispersed along the street is desirable. This could take the form of a small cafe or two, a corner shop, home offices or small professional suites. The floor space per tenancy should be limited to promote large uses being located within centres. Bridge Street also has potential for some commercial uses adjacent the Gordon Street shops, particularly west of Gore Street. Increase public parking capacity along laneways and along Bridge Street combined with future pedestrian links through to Gordon Street could support some small retail/commercial uses along the laneway (or possible shareway), through block links and the northern side of Bridge Street. These uses could compliment the Gordon Street centre and assist in activating the pedestrian network through this area.

Ackroyd Street adjacent Gordon Street shops west of Gore Street, has a mix of lot sizes, uses, access (some battleax) and on-grade parking. The interface between commercial uses and residential uses as suggested by the current zoning is not desirable. Residential uses, particularly multi-level, which would benefit from northern aspect, would have a poor outlook to the rear of shops and/or on grade car parks. Recent development interest in this portion of the street has expressed a desire for commercial uses, such as profession offices and a medical centre. These uses could support the retail and commercial uses along Gordon Street. Any development would need to consider the residential streetscape to the south and the amenity of residents. Potential median tree planting could assist.

In contrast to the western end of Ackroyd Street, the lots to the east of Gore Street have a consistent depth and have largely been developed as villas.

The Westport Neighbourhood north of Gordon Street is in walking distance of all three centres and is well suited to increased housing capacity. A change in land use zone from R3-Medium Density Residential to R4 - High Density Residential would better describe the intent of this area and limit its use for villas and townhouses,

which are an under utilisation of the land in this location.

The Westport Neighbourhood to the south of the Gordon Street centre, could retain its R1 zoning, which supports a range of housing forms, including apartments, townhouses and villas. Retaining this flexibility supports greater housing choice on this land, farthest from the major centres.

Aston Hill Neighbourhood

The land within the Aston Hill Neighbourhood is zoned R3 Medium Density with the exception of the Aboriginal Land Council parcel, which is zoned RE2 Private Recreation. The use of the Aboriginal Land Council land may be constrained by endangered ecological communities.

The southern side of Warlters Street is within the Aston Hill Neighbourhood but also faces Settlement City. While Council's Settlement City Structure Plan envisages the south side of Warlters Street as mixed use, recent development interest has expressed a desire for large format retail uses. In the short term, this type of retail would result in loading docks and on-grade parking along Warlters Street. This is not a desirable outlook for residential uses on the southern side of Warlters Street, particularly at the ground floor. Upper levels may still be desirable with foreshore views and car parking could be screened by trees.

There is an opportunity for commercial uses at the ground level of future developments along the south side of Warlters Street. Uses could reinforce the Town Centre and provide alternative opportunities for more fine grain commercial uses, in contrast to the large land holdings in Settlement City and higher value retail space within the shopping centre. In keeping with the existing R3 zoning, commercial uses would be located at ground level with residential above. Commercial uses could include small shops, such as destination speciality shops (verse passing pedestrian trade), small business or office premises, such as accountants, lawyers, surveyors.

At the western end of Warlters Street, is a large site adjacent Dixie Park. This site has a great potential for redevelopment, particularly in the context of the Settlement City Structure Plan. Changing the zoning of this site from R3 to R4 would promote its redevelopment as apartment buildings, which reflects the current FSR permissible on the site.

Town Beach West Neighbourhood

Current land use zones within the Town Beach Neighbourhood are predominantly R4 High Density Residential with R3 Medium Density Residential to the south of Church Street. This distinction reflects the areas proximity to the Port Macquarie Town Centre and the desire for tourist accommodation closer to the Town Centre, the foreshore and beach.

William Street has a mix of existing building uses along the street including houses, residential apartments, tourist accommodation, a cafe, small destination retail (fishing supplies, surf shop), professional offices, and community services. The scale and type of retail/ commercial offices could be retained along the street within future mixed use building forms. This is a desirable location in close proximity to the Town Centre for increased housing capacity. Any future commercial uses should be a component of shop top housing. This is permissible in the existing R4 High Density Zone.

Clarence Street within the Town Beach West

Neighbourhood links to the town centre retail area to the west. Buildings to the immediate west of this neighbourhood are generally tourist accommodation with some cafe/retail uses at ground floor. The potential development site on the south-east corner of Munster Street and Clarence Street should continue this pattern. This would be permissible in the existing R4 High Density Zone.

Design Principles

- To reinforce Council's retail and centres hierarchy.
- To promote increased housing capacity in close proximity to centres and open spaces.
- To reinforce the residential character of neighbourhoods.
- To promote modest amounts of commercial uses within neighbourhoods, which serve the daily needs of local residents.
- To promote activation along streets in key locations.
- To ensure uses are compatible with the adjacent context.

Recommendations

Westport Neighbourhood

- A. Consider changing the existing R3 Zone to R4 to better reflect its potential for increased housing capacity. This would prevent villa and townhouses, which are an underdevelopment of this land.
- B. Consider extending the B2 Local Centre to include lots along Ackroyd Street. These lots have limited residential amenity and could support uses complementary to Gordon Street,

while transitioning to the residential areas to the south. Ackroyd Street has a large road reserve and significantly wide verge to the south, which effectively divides residential uses from recommended commercial uses.

Aston Hill Neighbourhood

- C. Retain the existing R3 zone along Warlters Street to support a mix of smaller commercial uses with the opportunity for residential uses at upper levels. This would assist in transitioning from the Aston Hill Neighbourhood's residential use to the Settlement City Town Centre. Review the zoning as Settlement City redevelops and the amenity and character of Warlter Street changes.
- D. Consider changing the existing R3 Zone to R4 to better reflect its potential for increased housing capacity. This would prevent villa and townhouses, which are an underdevelopment of this land.

Town Beach West Neighbourhood

E. Consider changing the existing R3 Zone to R4 to better reflect its potential for increased housing capacity. This would prevent villa and townhouses, which are an underdevelopment of this land.



Figure 81: Current LEP Land Use Zones



Figure 82: LEP Land Use Zone recommendations



6.3 LEP - Height of Buildings

The approach to building height recommendations is based on two key considerations:

- the desired future character for each neighbourhood. Building heights shapes the future character of a neighbourhood in relation to its setting and topography. It defines the space and enclosure of streets and public spaces and provides visual definition and transition between places. Heights can be further refined and modelled with DCP controls such as upper level setbacks.
- amenity within both the public realm and on private land. This includes considerations for daylight and solar access, wind protection, outlook and the protection of privacy.

A key finding of the site testing showed that adjustments to heights were needed to deliver the current FSR provisions in some cases. Once adjusted, the heights were analysed to identify opportunities for increasing height and therefore housing capacity for each neighbourhood.

The height recommendations in this report are expressed, firstly, in storeys as a measurement that relates to human scale and is more easily visualised. However to support Council's LEP, which defines building height in overall metres, the recommendations are also translated into metres.

Westport Neighbourhood

Within the Westport Neighbourhood, the current

building height controls are distributed with the greatest height (5 storeys) to the east adjacent to the Port Macquarie Town Centre. Heights decrease further from the town centre with lowers height to the west (3 and 4 storeys) on the north facing hillside. Low heights (2 storeys) to the south of Gordon Street reflect the residential scale of the neighbourhoods to the south.

A number of opportunities for increasing height are available in response to:

- Redevelopment potential The areas to the west of Gore Street and along Bridge Street exhibit the best potential for change. There is a concentration of sites, which have not redeveloped under the current controls, or are not limited by strata title ownership.
- Spatial definition Increasing height along Gore Street and its proposed linear park will assist in distinguishing the street as focus for Westport Neighbourhood. Similarly, Bridge Street with its potential bridge link to Port Macquarie Town Centre and its additional parking capacity is accentuated within the broader context.
- Proximity to centres The Westport Neighbourhood is within walking distance of all three centres, which provides future residents with excellent access to shops and services.
- View share While lower building height on the hillside was intended to promote views from the town centre and churches over and beyond the Westport Town Centre, the view analysis has shown this is not achievable within the existing heights.

However, there is an opportunity to capture views to the foreshore, river and town centre from the hillside. This would assist in improving the viability of development in this area and provide view amenity to a larger number of dwellings.

Aston Hill Neighbourhood

Current heights within the Aston Hill Neighbourhood are generally 3 storeys with 4 storeys on the edges at Park Street and adjacent Dixie Park. Opportunities for increased heights are limited by the views of properties along the hillside and the limited boundary of this study. To maintain views to the river, heights along Warlters Street should remain 3 storeys.

The site adjacent Dixie Park is recommended to be increased to 5 storeys to better facilitate its current FSR of 1.5:1. Larger sites require more height to achieve their FSR as they require more open space and circulation areas between multiple buildings.

Town Beach West Neighbourhood

Building Heights within the Town Beach West Neighbourhood currently are distributed more finely than the Westport Neighbourhood, reflecting the diversity of lot sizes. The current heights emphasise corridors of development along the predominant grid streets to reinforce spatial legibility of the grid. Heights generally decrease to the south away from the Port Macquarie Town Centre.

Opportunities for increasing height and housing capacity are limited. Munster Street north of William is adjacent

the town centre and could be increased with minimal impact on the school. Church Street could also be marginally increased to support more efficient housing types, while retaining the transition in height from William Street and Gordon Street.

LEP Height of Building in Metres

To convert height in storeys to height in metres for the LEP, the following need to be considered:

- ground interface this allows for up to 1m for a building to project out of the ground to allow buildings to adjust to the topography and/or flood constraints of a site.
- floor to floor heights this includes minimum ceiling heights by use and the floor slab directly above.
- roof articulation this includes space for roof design, lift overrun and plant equipment.

Table OI shows the translation from storeys to metres for residential and mixed use buildings.

The following height in metres in Council's LEP are shown with their approximate storey height equivalent:

- 8.5m = 2 storeys
- 11.5m = 3 storeys
- 14.5m = 4 storeys
- 17.5m = 5 storeys
- 19.0m = 6 storeys

When the above equivalents are compared to the storey conversions in Table 01 and an allowance for roof articulation/lifts is included, there is insufficient metre height to accommodate four, five and six storey, mixed use/flexible ground floor buildings. To achieve the overall height, design solutions often push the ground level below the footpath level or provide insufficient

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ground floor heights. This can undermine the objective to promote activity, ground level entries, flexible use and surveillance along the street edges. Poor roof lines are also a result of insufficient height as limited space is left for articulation. The lack of space to articulation the building also discourages the use of the roof for communal open space, as lift access and shade structures can not be achieved.

Design Principles

- To reinforce the urban structure and give spatial definition to the predominant street grid.
- To promote view sharing.
- To support housing design with good amenity and environmental performance.
- To facilitate achievement of the recommended FSR.
- To ensure the level of ground floors accommodate flood constraints.
- To support non-residential uses with higher ceilings on the ground floor in desired locations.



Table 01: Comparison between storeys and overall metre heights with allowances for ground interface, use and roof articulation.



Figure 83: Measurement and components of building height

Recommendations

- Amend the Height of Building Maps in the LEP to increase the metres height control where mixed use/flexibility for ground floor uses is desired. The following metre heights are appropriate for Gore Street, Bridge Street, Gordon Street corners at Bridge and Hollingworth Streets, William Street and the corner of Clarence and Munster Streets:
 - 15.0m for 4 storeys
 - 18.0m for 5 storeys
 - 21.0m for 6 storeys
- The following changes to the Height of Building controls are proposed:
- A Retain and extend the existing 4 st height control to the corner. Retention supports view sharing to river and foreshore for properties to the west. Corner site recently developed as medical centre. Extension to corner reinforces the framing of Park Street and view corridor to foreshore. Also reinforces definition of the intersection/threshold between suburban neighbourhoods and town centre fringe urban neighbourhoods.
- B Increase existing height controls (3 and 4 st) to match existing FSR and to reinforce the spatial definition of Park Street and threshold (see above A).
- C Existing height controls (3 and 4 st) increased to match existing FSR.
- D Existing height controls along Bridge Street (3, 4 and 5 st) increased to 6 st. 3 and 4 storeys is too low to achieve existing FSR. Bridge Street has significant redevelopment potential and public domain benefits (increased street tree planting, increased on-street parking and potential future pedestrian bridge link to CBD). Increasing height and corresponding FSR can assist in creating development interest and subsequent funding for public domain improvements.
- E Gore Street is recommended as the future hub for the Westport Neighbourhood. A new linear park with some opportunities for cafes, SOHO and professional offices will create an identity for the neighbourhood and link it to the foreshore. Increasing height and corresponding FSR can assist in focusing development interest and subsequent funding for public domain improvements.

- F Existing height controls along Hollingsworth Street (4 and 5 storeys) is exceeded by a number of existing developments. The 4 storey control is too low to achieve the existing FSR. This street has limited development potential but some properties could change. An increased FSR and height would assist with this change and is appropriate adjacent the CBD and the creek corridor where amenity is greatest.
- G Increasing the existing height control from 2 to 4 st reinforces the north-south linkages to the foreshore and CBD along Gore and Hollingsworth Streets. It assist in spatially defining these streets across Gordon Street and linking the neighbourhoods to the north and south. The four storey height needs to be modelled with upper level setbacks to protect adjacent privacy and solar access.
- H Increasing the existing height control from 2 to 4 st to the north of Ackroyd Street recognises development potential in this area. To the east of Gore St 4 storeys is not appropriate as the majority of lots are single storey villa developments with limited separation at side boundaries.
- Existing height control of 2 storeys is too low for the existing FSR to support apartments. Many of the lots south of Gordon St with adequate frontages to support villas have been developed. Remaining lots could transition to apartments. Apartments have limited building depth and generally will have greater building separation than villas resulting in more open space. Heights can be modelled with upper level setbacks to assist in transitioning between existing and future building types.
- J Increased existing height control from 4 to 5 st on the eastern portion of the site and decreased existing height from 4 to 3 on the western portion of the site. This will assist in matching the existing FSR and transitioning height down adjacent existing houses. The site is almost 1 hectare and should incorporate a new street along Dixie Park, street widening at Aston Street and a potential pedestrian link. It is also constrained by a stormwater channel and overland flow path along the western boundary. Multiple buildings require space for separation and for open space. Therefore the modified height control is needed to support provision of these elements within the existing FSR.
- K Retain the 3 storey height along Warlters Street east of Aston Street. This support view sharing with properties to the south on the hill.
- L Heights controls are refined. This block has limited redevelopment potential. The 6 st/4 st existing controls is difficult to achieve across the lot depth and is not achievable on the mid-block lots with their existing FSR. End lots along Munster Street and Allman Hill could accommodate 5 storeys within the existing FSR. Of the mid-block lots, only one has redevelopment potential, the limited lot width can only support 4 storeys as a detached building.

- M The existing 3 storey height control is insufficient to deliver the existing FSR of 1.5:1 for the norther portion of the school site. As the school is not envisioned to redeveloped, a 3 storey height is appropriate to its use. This aligns with the he southern portion of the school site has a height of 3 with 6 storeys along William Street.
- N Existing height controls define William Street and Clarence Street with 6 storeys with parts of Munster Street as 4 storeys. Increasing heights to have a consistent 6 storey height along Munster Street would reinforce its spatial definition as an important north-south pedestrian connection between the recreational/open space to the south and the CBD/foreshore.
- O Increasing the height to 4 storeys would improve the viability of these lots and still provide a transition between the potential 6 storey context and the school site.
- P Height controls are retained along William Street and the western end of Church Street. This will result in a reduced FSR. Consultation with Council and the reference group suggested that 6 storeys was maximum height. The 4 storey lots on the southern side of Church St are increased to 6 to bring them into alignment with the future context.
- Q Along the eastern portion of Church Street heights are increased from 4 to 5 storeys. Lots to the north require additional height to achieve the existing FSR. Lots to the south require additional FSR to meet the allowable height of 4 storeys. Increasing the height would align the scale of the street on both sides. Church street is an ideal residential street as it has limited traffic and good proximity to the CBD, parklands to the south and foreshore/beach. Increasing residential opportunities along this wide street, would also support future streetscape improvements (tree planting and on-street parking).



Figure 84: Current LEP heights translated into their storey equivalent





Figure 84: Building height recommendations in storeys with LEP metre height shown in key



Figure 87: SECTION B-B Westport Neighbourhood - Bridge Street

Recommended height increase







Figure 88: SECTION C-C Aston Hill Neighbourhood at Warlters Street



Figure 89: SECTION D-D Town Beach West Neighbourhood from Clarence Street to Church Street



6.4 LEP - Floor Space Ratio

Floor space ratio is defined as the "gross floor area of all buildings within a site to the site area." Floor space ratio is a density control, which defines the amount of floor space on a site. It does not predict the form of buildings. A variety of buildings forms can be realised within the same FSR. Supporting controls such as use, height, setbacks, site coverage and landscape area or deep soil zones define a building envelope, which gives shape to the FSR.

Council's gross floor space definition is based on the State Government's standard definition in the LEP Standard Instrument. This definition excludes some elements from the gross floor space. These elements include external walls, common vertical circulation, basements, mechanical services, service and vehicular access area, and balconies. The refinements to the gross floor space definition in the Standard has resulted in a tight fit between current FSR and height controls in many Councils areas. This means more height is needed to achieve the same FSR.

Recommendations for FSR provisions were determined through the site testing process explained in Section 6.1. Two key findings from the testing found:

 small sites (under 650 sqm) or narrow sites (under 20m) can not achieve an FSR over 1.3:1 and maintain good design quality and amenity. A 1.3:1 FSR equates to 3 or 4 storeys maximum. Over 4 storeys greater separation is needed, resulting in reduced, less efficient floor plates and less viable development forms on small sites. A minimum site frontage and area control could be used to prevent excessive development with poor amenity on these site. This would encourage amalgamation of small sites. A LEP clause reducing FSR on certain site sizes could also assist in promoting amalgamation and limiting the expectation of development capacity of smaller lots.

• the jump from 1.0:1 to 1.5:1 in FSR categories is too great. A new FSR category for 1.3:1 would improve the fit between FSR and 4 storey height zones.

Westport Neighbourhood

Within the Westport Precinct Floor Space Ratios are broadly distributed with a 1.0:1 FSR along Buller Street and south of the Gordon Street shops. Gordon Street and the remainder of the neighbourhood has a 1.8:1 FSR, which equates to a 5 storey residential flat buildings. The broad area designated as 1.8:1 FSR does not reflect



Figure 90: FSR does not predict building form and a variety of forms can have the same FSR.

the current 3 and 4 storey height controls west of Gore Street within this area.

Opportunities within the Westport Neighbourhood include:

- providing better alignment between the desired height and the FSR controls to improve stakeholder certainty of development outcomes.
- reinforcing the proposed structure plan to increase heights along Gore Street, Hollingsworth Street, and Bridge Street.
- promoting increase housing capacity where there is the greatest potential for change (for example along Bridge Street and along Waugh Street west of Gore Street).
- reinforcing height and use transition between Gordon Street centre and residential uses south of Ackroyd Street.

Aston Hill Neighbourhood

Within the Aston Hill Neighbourhood FSRs are 1.0:1 with the exception of the larger site adjacent Dixie Park. To achieve the current 4 storey height along the western side of Park Street, the FSR should be increased from 1.0:1 to 1.3:1. The retention of the remaining FSRs align with the recommendation in this report.

Town Beach West Neighbourhood

Current FSRs within the Town Beach Precinct are distributed more finely between lot sizes and locations than in the other neighbourhoods. This approach is intended to closely follow the current height controls and variation in lot sizes. However the site testing has shown that some of these controls are not achievable.

Opportunities within the Town Beach West Neighbourhood include:

- strengthening the urban structure for taller building heights along the predominant street grid (200x200 grid).reducing FSRs from greater than 2.0:1 down to 2.0:1. This would align the floor space with the proposed height supported by Council and stakeholders.
- increasing FSR at the south-eastern corner of Munster and Clarence Streets to reflect the site testing of this long, narrow corner site and to promote amalgamation of the two lots. This would also support the completion of the street edge for the south side of Clarence Street.
- improving development capacity south of Church Street where current 0.65:1 FSR is too low and where greater opportunities for housing could be achieved.

Design Principles

- To promote increased housing capacity in proximity to centres, shopping and services.
- To support a variety of higher density housing forms.
- To reinforce the desired future character of each neighbourhood by ensuring floor space ratios are compatible with the desired building heights.
- To encourage urban regeneration by facilitating viable development opportunities, which deliver good amenity and environmental performance both within a site and with adjacent neighbours.
- To provide an appropriate correlation between the size of a site and the extend of any development on that site.

Recommendations

- Include a clause within the LEP to vary the FSRs on the Floor Space Ratio map for small and narrow sites. For example, "Despite clause 4.4, the maximum floor space for a building on a site with less than 24m frontage is the lesser of the following:
 - The maximum floor space ratio for a building identified on the Floor Space Ratio Map, or
 - 1.3:1 FSR."
- Add a new 1.3:1 FSR category in the Floor Space Ratio Map key.
- Revise the LEP Floor Space Ratio map as per the following:
 - A Increased FSR from 1.0:1 to 1.3:1 to align with the existing height control of 4 storeys. Corners are increased in FSR and height to align with proposed form of north-south streets.

В	Existing FSR increased from 1.0:1 to 1.3:1 to align with existing and proposed 4 storey height.
С	Existing FSR is increased from 1.8:1 and 1.0:1 along Gore Street to align with the proposed heights and reinforce it as the focus of the Westport neighbourhood.
D	Existing FSR is increased from 1.8:1 to 2:1 along parts of Bridge Street to align with the proposed heights.
Е	Existing FSR is increased from 1.8:1 and 1.0:1 to 2:1 along Hollingsworth Street to align with the proposed height controls.
F	Existing FSR is increased from 1.0:1 to 1.3:1 along to align with the proposed height controls along Gore Street south and Hollingsworth Street south. 1.3:1 is not a current FSR in the LEP. The jump from 1.0:1 to 1.5:1 does not support 4 storey heights. It is recommended that this be introduced for areas where 4 storeys apartments are desired.
G	Existing FSR is increased from 1.0:1 to 1.3:1 along the northern side of Ackroyd Street to align with the proposed height controls.
Н	Existing FSR is increased from 1.0:1 to 1.3:1 to align with the proposed height controls.
Ι	Existing FSRs are revised to align with proposed heights. Refer to M, N and O in the height recommendations table.
J	Existing FSR is increased from 1.0:1 to 2:1 to align with the proposed height controls.
К	Existing FSR is decreased from 1.5:1 to 1.0:1 for the norther part of the school site to reflect the existing height control. FSRs are increased from 1.0:1 and 1.5:1 and to 2:1 south of new street to align with height controls. These are attributed by lot. This allows for future subdivision of the school site. Alternatively Council could consider treating the school site as a whole site and requiring a masterplan for any future redevelopment. Refer to M, N and O in the height recommendations table.
L	Existing FSRs are decreased from 2.5:1 and 3.0:1 to 2.0:1 to align with the existing height control along William Street. The existing FSRs require heights of 8-9 storeys to achieve. Council and the reference group noted that greater than 6 storey was undesirable.
М	Existing FSR is decreased from 3.0:1 to align with the existing height control.
Ν	Existing FSR on corner lots is decreased from 3.0:1 to align with the existing height control. Existing FSR on mid-block lots is increased from 1.0:1 to 2.0:1 to align with proposed height control.
0	Existing FSR for the south side of Church Street is increased to align with the proposed height control.



Figure 91: Current LEP floor space ratios



Figure 92: Floor space ratio recommendations



6.5 DCP - Place Specific

Council's DCP May 2011 consolidates all the individual and place-specific DCPs into one document. The consolidated DCP replaces DCP no. 49: Westport Precinct, which covered land within the Westport and Aston Hill Neighbourhoods in this study, and DCP No. 46: Town Beach Precinct, which cover land within the Town Beach West Neighbourhood in this study area. DCP 2011 generally consolidates controls from all the previous DCPs that apply to specific development types and retains more targeted place-specific provision where relevant. The controls in this section are specific to each Neighbourhood and are aligned with the assumptions for building envelopes used in the site testing to derive height and FSR provisions. It is recommended that these controls are to incorporated into Council places-specific DCP section.

Westport Neighbourhood

The current DCP place-specific provisions for Westport are focused on streetscape improvements and the provision for new laneways.

Public domain improvements are addressed previous sections of this report and include:

- A revised laneway layout has been recommended in Section 2.4: Vehicle Connectivity and described in detail in Section 3.0: Westport Neighbourhood of this study.
- Improvements to the public domain, particularly Gore Street and Bridge Street, are recommended and discussed in Section 3.0: Westport Neighbourhood.

Additional place-specific controls are recommended to guide future building form within the Westport Neighbourhood with particularly emphasis on Gore Street, Bridge Street, Ackroyd Street and the laneways.

Aston Hill Neighbourhood

The south side of Warlters Street is currently addressed in the generic DCP provisions and referenced in the Settlement City Structure Plan. Improvements to the Warlters Street streetscape are addressed in the Settlement City Structure Plan and are the subject of ongoing negotiations with landowners within Settlement City.

A new park edge street between Dixie Park and the site to its north is recommended in this study. Refer to Section 4.0: Aston Hill Neighbourhood.

Additional place-specific controls are recommended to guide future building form along Warlters Street and the for the Dixie Park key site.

Town Beach West Neighbourhood

The current DCP includes place-specific provisions for the Town Beach precinct for through block connections and park edge streets. Within the Town Beach West Neighbourhood a through block connections is shown linking Gordon and Church Streets mid-block between Munster and Grant Streets. The lots along the south side of Church Street have narrow frontages. A requirement for a through block link through one or an amalgamated pair of lots is a constraint to the redevelopment of these sites.

Council has prepared streetscape design separate to this study for the upgrade of Church Street.

Additional place-specific controls are recommended to guide the future building form within the Town Beach West Neighbourhood with a particular emphasis on William Street and Clarence Street as mixed use areas.

6.5.1 New Streets and Laneways

Objectives

- To improve service and parking access to Gordon Street retail and commercial uses.
- To improve public access to parkland for adjacent residents.
- To improved pedestrian access to Gordon Street and to enhance existing links through redevelopment.

Development Provisions

- New laneways, park edges streets and through site pedestrian links are to be provided as shown in Figure 93: New Streets, Laneways and Through-site Pedestrian Links.
- 2. New laneways are to be a minimum 8m reserve for two way traffic with a 1.5m wide planting zone along the residential interface.
- New laneways are to be a minimum 6m reserve for one way traffic 1.5m wide planting zone along one side.
- New park edge streets are to be a minimum 12m reserve with a footpath along the northern side and parallel parking bays along the park edge.
- 5. New pedestrian through site links are to be a minimum 2m wide.
- 6. Lighting, paving, street furniture and street tree planting are to be provided in accordance to Council specification.

Discussion

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Refer to Sections 2.8 Parking; 3.6 Laneways and 4.4 Key Site at Dixie Park.



Figure 93: New Streets, Laneways and Through-site Pedestrian Links

6.5.2 Lot Size and Frontage

Objectives

- To ensure that development is carried out on sites that are adequate in size and dimension.
- To maximise the potential of land to achieve the desired floor space and to deliver greater housing capacity within the neighbourhoods.
- To enable design quality and adequate amenity within the site and between neighbours.
- To ensure that on-site parking requirements can be adequately met.
- To avoid isolated sites.

Development Provisions

- 1. A minimum lot frontage of 24m at the property line is required for residential flat development.
- 2. On sites with multiple street frontages, a reduced frontage of 18m may be appropriate, where it is demonstrated that adequate on-site parking, setbacks, separation and deep soil can be achieved.
- 3. Where a minimum street frontage can not be achieved, the development potential of the site is reduced.

Discussion

The previous Westport DCP included lot frontage controls with a minimum of 28m and a maximum of 42m. These were tied to building typologies from the SEPP 65: Residential Flat Design Code. These frontages were not carried through to the consolidated DCP.

As part of this projects, a range of lot sizes were tested. The testing showed that small sites, with a frontages below 24m, are limited to one basement level. This is because the

ramping required to access the second basement level is inefficient because turning radii are constrained and ramps significantly reduces the car parking numbers possible on the first level.

A maximum frontage is often mainly used to limit long buildings along the street in areas where a narrow street frontage is desired. There is no advantage to having a maximum site frontage in this study area as large sites with the potential for long building facades are uncommon.

Where sites are unable to achieve the recommended frontage, a reduced development capacity may be acceptable. As an established urban area with existing houses, villas and apartment buildings, this is likely to occur where:

- some existing sites are isolated and are unable to achieve the required lot frontage.
- a site owner has tried to amalgamate sites and can demonstrate that the adjacent owner is unwilling to sell

6.5.3 Height Limits

Objectives

- To ensure future development responds to the desired future scale and character of the street and local area.
- To provide space within the height control for roof design and articulation.
- To support the use of roofs for communal open space, where appropriate.
- To ensure ground floor ceiling heights are sufficient to support flexibility in use over the life of the building, where appropriate.

Development Provisions

- 1. Development must not exceed the maximum number of storeys as shown on the Building Height in Storeys Map.
- Setbacks and building alignments are to be consistent with the Street Edge Height and Upper Level Setbacks Map.
- Bridge Street south-west of Gore Street Where commercial uses are proposed for ground and first floor, a 2 storey street wall height is to come to the boundary with residential floors above setback 3 metres.
- The floor level of the upper most storey is to be at least 4.5m below the maximum permissible building height in metres.
- Gore Street, Bridge Street, and William Street -Ceiling heights for ground and first levels are to be a minimum of 3.3 m to promote flexibility in use over time.

Discussion

Refer to Section 6.3 LEP - Height of Buildings.

A height in storeys map could provide greater certainty of the desired future character. The metre to storey height equivalents in the current DCP should be amended as recommended in 6.3 LEP - Height of Buildings. This would assist in interpreting Council's intent and discourage an additional storey from being forced into the overall height. Additional benefits include:

- facilitating well designed roof lines by providing space in the overall height for building articulation,
- promoting communal open spaces on roofs by providing space for lift access and shade structures, and
- supporting the alignment of the ground floor of a building with the footpath rather than below ground level where amenity and streetscape outcomes are compromised.

Upper level setbacks assist in defining the street edge height in response to the desired future character. Council's current DCP includes an upper level setback where buildings are over 6 storeys. In general, an upper level setback of the top storey is proposed and has been incorporated into site testing. There are no heights proposed within this study over 6 storeys. In urban regeneration areas, it is likely that the future context will be characterised by greater diversity in building forms with a mix of existing and new heights. Therefore upper level setbacks are recommended in this study to: assist in defining a skyline to the building in addition to roof forms; to reinforce the scale of a street; and to assist in transitioning between new taller buildings and existing lower scale buildings.

Additional site specific recommendation include:

Buller Street - Within the 4 storey building height and between corner sites, the full 4 storey height is retained

to the street frontage. These buildings face Westport Park and there is no need to minimise the street edge height along the street.

- Bridge Street south, west of Gore Street This area has the potential to incorporate ground floor and first floor commercial or retail uses. It is desirable for these uses to engage with the street edge. This will minimise the vast street width and assist in activating the street edge.
- Laneways to the south of Gordon Street It is proposed to have a 2 storey scale along the laneways with upper floors set back.
- Park Street, west The full 4 storey height is retained to the street frontage. This matches the street edge height on the east side where 5 storey heights with an upper storey setback is proposed.
- Warlters Street The full 3 storey height is retained to the street frontage. Sites are shallow in depth and an upper level setback would further reduce the development potential of these sites, where: a street setback is maintained along this street to assist with marrying existing and future uses.; and where the slope of the land and an objective to have ground floor uses aligned with the footpath could result in an additional storey.
- New Street and School Street This area is characterised by a variety of overall heights. A 3 storey height to the street frontage will assist in unifying the street.
- William Street, south A 2 storey street edge height is proposed with upper storeys setback. The lower two storey could be retail/commercial uses. The two storey height will assist in transitioning with existing buildings and with the heritage listed cottage.

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Roof design is an important component of building design. It assists in defining a skyline for an area, which can contribute to its character and provide a pleasant outlook for surrounding buildings. In areas with a variety of topography, such as Port Macquarie, the skyline of buildings is important. Roof design also contributes to the environmental performance of a building. The recommended control encourages roof design and limits proposals, which maximise the metre height and result in a flat roof line. It also provides the opportunity to use the roof for communal open space with lift access and shade elements.



Figure 94: Recommended street edge height and upper level setbacks map

6.5.4 Streetscape and Front Setbacks

Objectives

- To facilitate redevelopment of a variety of lot depths.
- To reinforce the desired future character, building use, and spatial definition of the street.
- To promote outlook and surveillance of the street.
- To provide private open space for street level units.

Development Provisions

- Setbacks and building alignments are to be consistent with the Building Setback and Alignment Map.
- 2. Where no setback is shown, a 3m street setback is to be adopted.

Discussion

A 3m street setback is generally adopted throughout the study area. This provides adequate space in combination with an articulation zone for private terraces/courtyards to ground floor dwelling units.

As an area undergoing change, it is not appropriate to use an average setback with adjoining buildings. There is great variety of street setbacks in the study area and applying averages will result in an undulating street edge and overly generous setbacks. In general larger buildings, both apartments and the occasional commercial uses, are sited closer to the street than individual houses. It is appropriate to establish a new pattern as the areas change.

There is a large variety of lot sizes and depths within the study area. Overly large street setbacks, limit the capacity of shallow depth sites to change, for example along the south side of William Street and along many north-south streets, such as Gore Street.

Place-specific variations as shown in the Street Setback and

Alignment Map are below:

Westport Precinct

- Gore Street Zero street setback is recommended to reinforce Gore Street as the focus of the Westport Neighbourhood. Ground floor uses are intended to be flexible for either commercial, home office or residential. The reconfiguration of the street as a linear park provides amenity and outlook for ground floor uses. The lot depths are shallow and removing the street setback improves the development capacity of the site and provide more space at the rear of properties to better address the amenity of adjacent properties.
- Bridge Street, west of Gore Street Bridge Street, in this location, is recommended to have a zero setback where commercial/retail uses are proposed at ground and first floor. If residential use is proposed the setback is 3m. This assist in activating this portion of Bridge Street. Additional on-street parking and a potential public car park, will increase the use of this area. Providing opportunities for a mix of use, will assist in enlivening the area and drawing people through to the Gordon Street shops.
- Gordon Street While Gordon Street is outside the study area, the interface with north-south streets is addressed to facilitate the integration of the Westport Neighbourhood to the south and north of Gordon Street. It is desirable for the zero setbacks and awnings along Gordon Street to turn the corner.
- Laneways to the rear of Gordon Street properties The laneways have the potential to be partially activated, particularly where public parking is located along them and through site links connect pedestrians to Gordon Street. To improve the amenity of laneways and their safety, 2m setbacks are proposed for lots facing Bridge

Street. This will enhance surveillance, while providing a spatial separation to assist with privacy. It also provide space for a ground floor commercial use or home office to have a transition are for planting, awnings, and outdoor seating.

Aston Hill Neighbourhood

Warlters Street - A 3m setback along Warlters Street is proposed. Where ground floor commercial uses are provided, the setback provide space to transition and manage the sloping sites. Setbacks provide opportunities for landscaping, to assist in improving the streetscape and presentation of the building to the street. This supports the street as location for destination some small commercial tenancies supplementing the town centre retail/commercial focus.

Town Beach West Neighbourhood

- William Street A 2m setback along William Street is proposed. It is desirable for the street to have commercial uses at ground level and potentially the level above. The street has a mix of street setbacks and uses. A street setback can contribute space to the narrow verge and footpath and provide space for outdoor dining or landscaping. As incremental change is likely, a street edge building form with an continuos awning is not appropriate. Individual fabric awnings, or similar, would manage the mixed character of the street.
- Clarence Street Buildings to the east and west of the site have awnings with street edge alignment and commercial ground floor uses. The remaining sites on the south should continue this pattern. To the north the sites transition to residential. There is also an opportunity for the corner at Munster to include a commercial tenancy, similar to the corner to its west.

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Figure 95: Recommended street setback and alignment map





Figure 96: Building envelope sections show place-specific variation to street edge alignment - street setbacks and upper level setbacks

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6.5.5 Side and Rear Setback

Objectives

- To provide access to light, air and sun, views and outlook within a site and for neighbouring properties.
- To assist in providing adequate privacy between properties.
- To retain or establish a pattern of spaces between buildings that gives character to the streetscape.
- To assist in managing the interface between different densities at zoning boundaries.
- To provide space for soft landscaping and deep soil.

Development Provisions

- 1. Buildings are to be setback 3m from side boundaries.
- 2. Buildings are to be setback 6m from rear boundaries.
- South of Gordon Street, where existing residential uses are located to the rear, the rear setback is to be increased to 10m.
- Party wall development is to be used along the south side of Clarence Street within the Town Beach West Neighbourhood.
- 5. Party wall development is not appropriate in other areas within the Westport, Aston Hill and Town Beach West Neighbourhoods.

Discussion

A 3m side setback is recommended. The existing 1.5m setback control does not provide sufficient space between buildings. This can be seen at the newer apartment building on the corner of Gore and Waugh Street. A 3m setback provides opportunities for some non-habitable room windows, better facade design and aligns with the BCA fire regulations. It also provides adequate space at ground level for landscaping, ground floor private open space and is more accessible for maintenance. Party wall development is generally not appropriate with the 3 neighbourhoods. Party walls do not sit well in an residential neighbourhoods with a variety of existing and likely future typologies. An exception is Clarence Street, where a party wall condition is pre-existing.

The current DCP requires a "minimum rear setback of 6.0m from the building and sub basements". If the recommended amount of deep soil can be achieved, the rear setback for basement may not need to be 6m as the deep soil can be achieved in a number of configurations. Supporting a site specific response to deep soil and greater flexibility in rear setbacks for basements may assist in improving the capacity of sites to meet car parking requirements and may limit the excavation cost of more than one basement.

South of Gordon Street, the existing character is largely houses and villas. To transition new development at the proposed height with existing low scale dwellings, a 10m rear setback is recommended.



Figure 97: Building envelope sections show place-specific variation to rear setback south of Gordon Street.

6.5.6 Kooloonbung Creek

Objectives

- To promote the use and safety of the Kooloonbung Creek pedestrian/cycle way.
- To improve the appearance and character of the creek corridor.

Development Provisions

- Where possible, buildings are to address Kooloonbung Creek pedestrian/cycle way with secondary building entries and individual entries to ground floor units.
- 2. Where topography and flood management, limit the ability for units to engage with the pathway, upper level balconies and communal open spaces are to overlook and contribute to the surveillance of the creek corridor.
- 3. Refer to fences and retaining walls for appropriate controls to enhance visibility and to reinforce the pedestrian scale of the corridor edge.

Discussion

Kooloonbung Creek is an important component of the waterfront parkland network and the pedestrian/cycle network. It assist in providing pedestrian access to the town centre. Currently buildings along the creek corridor turn their backs on the corridor, resulting in a poor interface at ground level and a perception of poor safety. Buildings along this corridor could better engage with the corridor to enhance its safey and improve its usage as a pedestrian/ cycle way. The corridor should be treated as a secondary street frontage and activation with ground floor unit entries and secondary building entries where possible.

6.5.7 Building Separation

Objectives

- To ensure new development is scaled to support the desired future characters with appropriate massing and spaces between buildings.
- To assist in providing solar access and natural ventilation within a site and with adjacent neighbours.
- To provide reasonable levels of visual privacy externally and internally, during the day and night.
- To balance outlook and views from principal rooms and private open spaces with visual privacy.

Development Provisions

- Side and rear walls are to be articulated to achieve privacy separation with balconies and windows of adjacent buildings. Separation distances are to be measured from the boundary as:
 - up to 4 storeys/12 metres
 - 6 metres for habitable rooms and balconies
 - 3 metres for non-habitable rooms
 - five to eight storeys / up to 25 metres
 - 9 metres for habitable rooms and balconies
 - 4.5 metres for non-habitable rooms
- 2. Where an existing strata titled building adjacent the proposed development site does not provide adequate separation, privacy screens and/or louvres are to augment the above separation distances.

Discussion

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Separation distances are recommended in SEPP 65: Residential Flat Design Code. Existing strata buildings built before SEPP 65 often have windows oriented to side boundaries with limited side setbacks. This often means that the separation distances in the RFDC measured from windows on one site to another is often unachievable. A common condition within the study area. Separation should be equally split between sites so that one site does not bear the burden of the requirement. Recommended revisions to the controls, measure separation from the window as half the required distance. Where the adjacent building achieve less than half, other privacy measures, such as privacy screens should be used to augment the separation distance. Separation is the primary means of achieving visual privacy and also contributes to daylight and ventilations. Privacy screens should only be used to supplement separation distances or where existing constraints can be demonstrated.

6.5.8 Communal Open Space

Objectives

- To provide residents with passive and active communal open space.
- To ensure communal open space is consolidated, configured and designed to be useable and attractive.
- To support site specific responses to the location of communal open space.

Development Provisions

- 1. Communal open space required shall be 25% of the site area.
- 2. Where it is demonstrated that 25% is not achievable due to site size constraints, provide a minimum 5m2 per du as consolidated communal open space.
- 3. A reasonable amount of solar access is to be provided to the principle/useable portion of communal open space for a minimum of 2 hours between 9am and 3pm in mid-winter. **Definition** - Principle portion of communal open space equates to 5m2 per dwelling unit.
- 4. Requirements for communal open space may be reduced where a development contributes to the enhancement of public open space. In particular, properties along Gore Street may contribute to the linear park in lieu of communal open space.
- Roof top communal open space is to be setback from building edges and located to minimise overlooking to adjacent properties.

Discussion

Communal open space is an important environmental resource and provides "breathing space' between buildings.

The size, location and design treatment of COS will vary depending on the context of the site and the scale of development. The function of COS is to provide amenity in the form of: opportunities for group and individual recreation, opportunities for social interaction, and amenity for surrounding building occupants.

The current general DCP includes communal open space, deep soil and landscaping provision. A minimum 2m dimension for COS and a minimum 3m dimension for landscaping is required. It is appropriate to include a minimum dimension for landscaping. The minimum for communal open space could be removed as it is about usefulness of space for people and should ideally be a consolidated space. Long thin spaces do not support communal use.

25% on many of the sites within the study area can be difficult to achieve as a consolidated area or two. As COS is about creating useful space for residents, allocating it by population rather than site area may be more appropriate, particularly as Council's DCP includes landscape provisions based on site size and with a minimum dimension.

Ideally COS should receive solar access. North-facing sites are likely to provide COS at the rear, where it is significantly overshadowed and has limited amenity or capacity for landscape. Roof top communal open space may be appropriate as it benefits from improved solar access and potential views. Adjacencies between sites and the management of overlooking needs to be considered.

Communal open space can overlap deep soil areas, however the amount of overlap is limited to planted areas, which retain deep soil, and up to 10% of paving. Refer to deep soil.

Where sites can not achieve consolidated, useful communal open space, a contribution to public open space is

desirable. A linear park is proposed along Gore Street. The site along this street are shallow and have limited space for useful communal open space. It is desirable for new developments along this street to contribute to the linear park and streetscape in lieu of on-site communal open space.

6.5.9 Deep Soil

Objectives

- To contribute to the amenity and desirability of neighbourhoods.
- To enable the long life span of trees by providing suitable areas for healthy root growth and anchorage.
- To assist with management of the water table and water quality.
- To promote environmental benefits, including reducing local air temperatures and improving air quality.

Development Provisions

- 1. Deep soil is to be provided according to lot size:
 - Sites less than 650m2, require a minimum 7% deep soil,
 - Sites 650-1500m2, require a minimum 10% deep soil
 - Sites greater than 1500m2, require a minimum 15% deep soil.
- Deep soil is to have a minimum dimension of 6m. On small site, where it can be demonstrated that 6m is unachievble, a 3m minimum may be permitted. As deep soil is typically located along the rear boundary, sites likely to be constrained include sites under 30m deep, with laneway access and frontage, or where a new laneway is provided.
- Deep soils zones are to be consolidated on a site and where possible co-located with adjoining deep soil zones.
- 4. Approximately 10% of deep soil zones include pedestrian pathways or paving which are specifically

designed to allow for tree root growth. For example a paving profile of up to 250mm deep or decks with shallow pad footings.

Discussion

The current DCP includes both landscaping and deep soil provision. Deep soil is a component of the broader landscaping provision.

Deep soil zones are areas of soil unimpeded by buildings or structures within a development site. Deep soil zones excludes basement car parks, services, swimming pools, tennis courts and impervious services including car parks, driveways and roof areas. Up to 10% of a deep soil zone may have paving that does not interfere with the root zone.

Deep soil was tested in relation to building footprint and car park layout. Council was concerned deep soil was overly impacting development by forcing additional car park basements. The testing revealed that the current control for 6m deep soil zone across the width of the site is a constraint on some sites. This is due to the diversity of lot widths and depths within the study area. In particular the current control constrains: shallow sites, those under 30m; site with laneway access as the ramp impacts deep soil; sites which address a laneway as it may be more appropriate to have individual courtyards and a street setback under 6m.

It is preferable that deep soil zones be consolidated within a site and where possible co-located with deep soil zones on adjacent sites. This provides the best benefits for tree growth and ground water recharge. A minimum dimension of 6m is necessary to support medium and large trees and for the retention of existing trees. A minimum dimension of 3m on constrained sites will support small trees and shrubs and assist with some ground water recharge.

Corner sites - The current DCP includes a diagram for

amalgamated corner sites and requires that the deep soil zone continues to street boundary. The testing has revealed that this approach limits building footprint and carpark layout options. It may be preferable on some sites to consolidate the deep soil in the internal corner rather than extend it across the boundary. It is recommended that this diagram be removed.

It is important that Council promote the engagement of a landscape from the beginning of the project. A landscape architect can assist in determining the best layout for a site to support viable landscaping and deep soil zones and to ensure spaces are useful and fit for purpose.

6.5.10 Fences and Retaining Walls

Objectives

- To contribute to the desired streetscapes of each neighbourhood.
- To facilitate safe and active streets.

Development Provisions

- Within the Westport, Aston Hill and Town Beach West Neighbourhoods, fences within 1m of the boundary are to follow the street alignment with a maximum height of 1.2m.
- 2. On sites where the ground floor level is above the ground level at the boundary or in flood affected areas, a secondary higher fence or balustrade may be appropriate setback 1m from the boundary and up to 2m high above the boundary level.
- Any fences or retaining walls over 1.2m above the boundary level should be 50% transparent above the 1.2m datum.
- 4. Where the site slopes along the street, fencing should be incrementally stepped to reduce its height.

Discussion

Council is concerned with the poor street frontage of some recent and existing apartment buildings. This study recommends both reduced street setbacks and revised fence controls to assist in improving the interface of new buildings with the street and to facilitate surveillance and safety.

Minimal street setback are promoted in this study to improve the activation and surveillance between ground level apartments and private open spaces with the street and to improve the efficiency of development sites. The recommended fence height and transparency seeks to balance activation and surveillance with privacy for ground floor residences. It is important for fence heights along footpaths to have a human scale. The detail of fences should also give the perception that adjacent residents can view activity on the street.

edge.



Figure 98: 1.2m fence with planting along footpath and 3m setback



Figure 99: On sloping sites or flood affected sites a low retaining wall combined with landscaping and a transparent fencing minimises the impact of a higher street



Figure 100: Step up from footpath to ground floor



Figure 101: Where zero setback and level access



Figure 101: Where zero setback and elevated ground level

6.6 DCP - Generic Provisions

Many provisions within the DCP are relevant for building types across the LGA rather than a place-specific location. The following section aims to improve the design, amenity and environmental performance of residential flat buildings by recommending amendments to Council current DCP provisions. The tables include Council's existing DCP objectives and development provisions, where change is advised, and specific recommendations for their revision. The rationale for each change is also provided.

6.6.1 DCP - Built Form: Building Depth

Existing Objective	Existing Development Provision	Recommendation
OB14: To ensure that apartments are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants. To provide natural ventilation in non-habitable rooms, where possible. To reduce energy consumption by minimising the use of mechanical ventilation, particularly air conditioning.	DP14.1: The maximum depth of the building zone is 18 metres for habitable buildings (including articulation zones).	 DP14.1: Revise controls to say: Building depths are to be between 12m and 18m to support good daylight and ventilation. The maximum apartment depth is to be 16.2m measured from glass to glass.
OB15: To distribute building bulk and height on the site so as to maximise the useable outdoor area to allow for landscaping, deep planting, maintenance and retention of existing vegetation, and to reduce stormwater runoff.	DP15.1: Buildings shall be sited across the frontage of the site (not down the length of the site).	3. Remove existing control DP15.1.
Rationale:	1	1
guidance. However, on some smaller sites, floor plans may exc good ventilation, solar access and daylight. Appropriate habita natural ventilation. Appropriate apartment depths are based of While a perimeter block building form is desirable as it reinford	and master plan sites. For the design of apartments, an apartment of eed 18m but the internal apartment layouts may achieve desirable ha able room depths are based on a ratio of 2.5:1 (where 2.5 x ceiling heigh on a ratio of 6:1 (where 6 x ceiling height = apartment depth). Refer to ces the street alignment and shapes the street and provides opportu	abitable room depths and apartment depth, which support ght = room depth). This facilitates acceptable daylight and b Energy Conservation and Solar Access. unities for landscaping and stormwater management (where the

While a perimeter block building form is desirable as it reinforces the street alignment and shapes the street and provides opportunities for landscaping and stormwater management (where the site slope allows). Building 'down the length of the site' or to the rear of a street edge building form, is necessary to achieve the current and recommended floor space controls. Refer to Section 2.7: Built Form and Housing Types. Deep soil controls assist in providing landscaping, retention of existing vegetation, and reduced stormwater runoff.

6.6.2 DCP - Built Form: Energy Conservation and Solar Access

private open spaces. To reduce reliance on artificial lighting and ventilation. DP16.2: Buildings are to have a thin cross section, apartments with dual orientations or two storeys and high ceilings. DP16.3: Single aspect apartments to have a maximum depth of 8 metres. DP16.4: Windows are to be designed to catch prevailing breezes and be hinged to funnel breezes into the apartment.	 Ensure living rooms and private open spaces for at least 70% of apartments in a building receive a minimum of three hours direct sunlight between 9am and 3pm. Limit the number of apartments with no direct sun-light between 9am and 3pm in mid-winter to a maximum of 15 percent of the total apartments proposed. Replace DP16 3: Habitable rooms are to have a maximum
provided to allow for ventilation and security. DP16.6: Innovative technologies are to be explored in order to naturally ventilate internal rooms such as bathrooms and laundries as well as underground car parks.	measured perpendicularly from the window

It is important to distinguish between solar access, which is direct beam radiation from the sun (sunlight) and daylight, which consists of skylight (diffuse light from the sky) and sunlight and changes with the time of day, season and whether conditions.

In urban regeneration area with narrow deep lots and a where the majority of lots face north or south, it is not always possible to achieve 3 hours of sunlight in mid-winter. The control to orient buildings to with main living area and windows facing north and east is not always possible or desirable. Side impacts with neighbours is a significant constraint in urban regeneration areas. It is best practice to orient main living areas and windows to the front and rear of a site to minimise impact (privacy/overlooking) with neighbours. On larger sites where "L" and "T" shaped buildings can be achieved, maximising the north and east orientation living rooms and open space should be promoted. Directly east and west facing units, such as common in the study area along north-south streets, it is not possible to achieve 3 hours. Where 3 hours can not be achieved, a minimum of 2 hours is desirable. Where apartments receive less that the 3 hours of sun, dual aspect, units; shallow units; increased ceiling heights and window sizes; or split level or maisonette apartments with void spaces are encourage to maximise daylight. Supporting a limited number of units which do not achieve direct sunlight provides some flexibility to respond to site or context constraints.

Lightwells are not effective sources of sunlight in taller buildings and provide limited daylight benefits. These spaces can also result in compromised visual and acoustic amenity. Lightwells should achieve separation distances recommended in this report.

6.6.3 DCP - Built Form: Private Open Space

Existing Objective	Existing Development Provision	Recommendation
OB29: To ensure that the private open space provided for a dwelling is useable and meets the occupants requirements for privacy, safety, access, outdoor activities and landscaping.	DP29.1: All dwellings at ground floor level are to have a total minimum area of 35m2 in one area with a minimum dimension of 4m x 4m; have a maximum grade of 5%; and be directly accessible from a ground floor living area.	 All dwellings at ground floor level are to have minimum private open space of 16sqm with a minimum dimension in one direction of 3m; have a maximum grade of 5%; and be directly accessible from a ground floor living area.
OB30: To ensure such area is of dimensions to suit some outdoor recreational and service functions of the residents.	DP30.1: Where the open space is of irregular shape, any areas with a width of less than 2 metres will not be included in the calculated area.	2. DP30.1: Not needed if above.
	DP30.2 Dwellings located on or above first floor are to have balconies with a minimum area of 8m2 with a minimum dimension of 2m, with direct access from the living area.	 J. Dwellings located on or above the first floor are to have balconies with a minimum clear, unobstructured area and width according to apartment type: studio - 4m² 1 bedroom - 8m², minimum 2m wide 2 bedroom - 10m², minimum 2m wide 3 bedroom - 12m², minimum 2.4m wide

A minimum dimension (DP30.1) is not needed as it is a duplication of the minimum controls for ground floor and balcony space.

Reductions for ground floor private open space align with the street setback requirements in this report. The current provision are more suited to suburban areas, with a predominance of houses. Reducing the requirements assist in the site planning of smaller, often constrained sites within the study area. The proximity of the study area to open spaces and improved access as recommended in this report, provides a high level of amenity for residents.

Balcony sizes are aligned to the likely population of a dwelling.

6.6.4 DCP - Built Form: Acoustic Privacy

Existing Objective	Existing Development Provision	Recommendation	
OB36: To protect the acoustic privacy of onsite and nearby residents.	DP36.3: Openings of adjacent dwellings shall be separated by a distance of at least 3m.	DP36.3: Amend to 6m.	
Rationale:			
This control contradicts building separation guidance within the Residential Flat Design Code and updated recommendations in Side and Rear Setbacks.			

6.6.5 DCP - Built Form: Visual Privacy

Existing Objective	Existing Development Provision	Recommendation
OB40: To protect the visual privacy of on-site and nearby residents.	DP40.1: Direct views between living area windows of adjacent dwellings shall be screened where: ground and first floor windows are within a 9m radius from any part of the window of the adjacent dwelling; other floor windows are within a 12m radius; direct views from living rooms of dwellings into the principle area of private open space of other dwellings shall be screened or obscured where they are within a 12m radius.	DP40.1: Amend to align with recommendation in Side and Rear Setbacks.
Rationale:		1
65: RFDC state 12m separation between windows of habi the separation distance should be divided equitably, so 6	do not achieve the desired building separation and overly constrair table rooms/balconies on a site and with adjacent sites. If this is ac m per site. This means that the overall separation in this instance, and the building is under 4 storeys, should not require screens. Re	cross a property boundary to a pre-SEPP 65 buildings, then is under the required 12m. In this case, privacy screens may

6.6.6 DCP - Built Form: Accessibility

Existing Objective	Existing Development Provision	Recommendation	
OB42: To maximise the number of accessible, visitable and adaptable apartments in a building.	DP42.1: Barrier free access to at least 20% of dwellings in the development is provided.	DP42.1: Amend terminology and determine best approach for PMHC.	
Rationale:	I		
free access is a out of date term which is no longer used. Livea and supported by the property industry, provides "technical ad LHDG 2012 provide guidance for achieving 3 levels of liveable h be incorporated into apartments. These include:	upport equal access to dwellings, mobility within dwellings and the c ble Housing Design Guidelines 2012 (http://www.liveablehousingaust vice and guidance on key easy living features that make a home easi nousing: silver, gold and platinum. While the guidelines to date are p eet entrance and /or parking are to a dwelling entrance that is level.	rralia.org.au/design.php) published by the Federal Government er and safer to live in for people of all ages and abilities." The	
2. At least one, level (step-free) entrance into the dwelling.			
3. Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces.			
4. A toilet on the ground or entry level that provides easy access In a two storey apartment, this would mean the entry level.			
5. A bathroom that contains a hobless (step-free) shower recess.			
6. Reinforced walls around the toilet, shower and bath to support the safe installation of grabrails at a later date.			
7. A continuous handrail on one side of any stairway where there is a rise of more than 1 metre.			
The aim of the LHDG is to maximise the amount of housing that can be made more liveable for all rather than providing % of adaptable or accessible housing. Once a dedicated adaptable or accessible unit is built and sold, it is no longer available for those who may need it.			

6.6.7 DCP - Built Form: Entries and Corridors

Existing Objective	Existing Development Provision	Recommendation
DB51: o create entrances that provide identifiable, safe and unctional accesses to the development.	 DP51.7: Corridor widths shall be a minimum of 2.5m wide and 3.0m high. DP51.9: Longer corridors shall be articulated by: changing the direction or width of a corridor; utilising a series of foyer areas; providing windows along or at the end of corridor. 	DP 51.7: Amend existing provision to say entries and lobbies instead of corridors.
Rationale: This is confusing and seems to be referring to main building	gentries and lobbies. This is excessive for corridors.	

6.6.8 DCP - Built Form: Balconies

Existing Objective	Existing Development Provision	Recommendation
OB52: To ensure balconies provide for the enjoyment of outdoor living. To provide useable outdoor living areas.	 DP52.2: The main balcony is to be minimum width of 2.0m with a minimum area 8.0m2. 	 Consolidate with private open space. Refer to recommendations for private open space.
Rationale:		

