



centre for  
subtropical design

# Submission on the Brisbane City Centre, draft Neighbourhood Plan

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## TABLE OF CONTENTS

1	Introduction	Page 2
	1.1 Introduction	Page 2
	1.2 Role of Centre for Subtropical Design	Page 2
	1.3 Purpose of this report	Page 2
2	Sub Tropical Design in Brisbane	Page 3
	2.1 Introduction	Page 3
	2.2 Subtropical Design	Page 3
3	Comments on the Draft City Centre Neighbourhood Plan	Page 5
	3.1 Introduction	Page 5
	3.2 Evaluation and Comment	Page 5
4	Conclusion and Recommendations	Page 13
	4.1 Conclusion and Recommendations	Page 13

## **1 INTRODUCTION**

### **1.1 Introduction**

The Centre for Subtropical Design provided comment and feedback to Council on its original Draft City Centre Masterplan and is interested in maintaining dialogue with Council on achieving subtropical design outcomes across the City. Council is to be congratulated on the inclusion of subtropical design aspects within the draft City Centre Neighbourhood Plan.

This report has been prepared by John Gaskell Planning Consultants on behalf of the Centre for Subtropical Design to review the draft City Centre Neighbourhood Plan and prepare a submission to Council in response to the Neighbourhood Plan.

### **1.2 Role of the Centre for Subtropical Design**

The Centre for Subtropical Design's core purpose is to demonstrate and promote subtropical design in our local communities. The Centre's vision is a regional built environment that enhances residents' quality of life through responses to the subtropical climate, landscape, lifestyle, water efficient and low energy consuming strategies, which are appropriate and environmentally sustainable.

The Centre researches and promotes high quality planning, design and development in the built environment, to respond to Brisbane and the South East Queensland region's cultural, landscape and climatic characteristics:

- Community-based research: Locating projects and research opportunities within local and regional communities;
- Real and relevant projects: Developing and promoting real projects which respond to immediate and relevant community concerns whilst demonstrating practical solutions;
- Excellence in design: Promoting design excellence and models of best practice.  
(<http://www.subtropicaldesign.bee.qut.edu.au/> 3 July 2006)

### **1.3 Purpose of this Report**

The purpose of this report is to provide constructive feedback on the draft City Centre Neighbourhood Plan, focussing on improving subtropical design outcomes in the Brisbane Central Business District (CBD). The report includes the following sections:

- Section 1, (this section) which outlines the objective and purpose of the review;
- Section 2, which summarises subtropical design and its application in Brisbane;
- Section 3, which critiques the draft City Centre Neighbourhood Plan in regard to subtropical design;
- Section 4, which summarises and concludes the overall recommendations to improve the Neighbourhood Plan.

## 2 SUBTROPICAL DESIGN IN BRISBANE

### 2.1 Introduction

The purpose of this section of the report is to provide an outline of subtropical design principles and how these principles can be expressed in building and urban design. This part of the report is provided to Council to provide a clear understanding of the key aspects of subtropical design in planning, and in particular how this might be expressed in the City Centre. This section may be useful in providing stronger guidance in the draft City Centre Neighbourhood Plan (refer to Section 3).

### 2.2 Subtropical Design

The subtropical values of openness and connection with nature are important mechanisms to ensure the continuation of subtropical character and identity as our environments become more consolidated:

- Urban development at all scales should (wherever possible and appropriate) contribute to the construction of an open and permeable built environment, and promote an outdoor lifestyle;
- Urban development at all scales should include for the close integration of landscape and other natural elements, and should be developed in response to climate.

#### 2.2.1 Subtropical Neighbourhood Design

Subtropical design focuses on our natural and built environment being designed to be responsive to our climatic conditions, natural features, culture and lifestyle. Accordingly there is a close nexus between subtropical design outcomes and ecological sustainability.

The City Centre Neighbourhood Plan incorporates the key economic, historic and cultural focus of our region. It is therefore a key neighbourhood in the city. Accordingly it is appropriate to understand that subtropical design outcomes can be expressed at a neighbourhood planning level, as expressed by the principles<sup>1</sup> outlined below:

- The Subtropical Neighbourhood is a neighbourhood;
- Subtropical neighbourhoods aggregate to form a subtropical town and city;
- The Subtropical Neighbourhood has a distinctive relationship to its site and landscape;
- The Subtropical Neighbourhood is characterised by its parks and open spaces;
- The Subtropical Neighbourhood has subtropical streetscapes;
- The Subtropical Neighbourhood creates sites for subtropical buildings;
- The Subtropical Neighbourhood has a subtropical landscape and allows one to grow; and
- The Subtropical Neighbourhood has walkable journeys that are comfortable.

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<sup>1</sup>: CSD (2004) *Subtropical Neighbourhood Design*. Deicke Richards 28 Feb – [www.subtropicaldesign.bee.qut.edu](http://www.subtropicaldesign.bee.qut.edu)

Although these principles have more relevance to the overall design of the City Centre in the City Centre Master Plan, it is important that the built form outcomes in the draft City Centre Neighbourhood Plan reflect the goal of creating subtropical neighbourhoods.

### 2.2.2 Subtropical Building Design

The draft City Centre Neighbourhood Plan contains planning and design principles and outcomes for site development in the city centre. The Centre for Subtropical Design recommends that the following subtropical design principles be more clearly expressed in the introductory sections of the Neighbourhood Plan (refer to Section 3 of this report).

The Centre for Subtropical Design is of the view that subtropical building design should take account of two overarching values - a sense of openness and permeability and, engagement with the natural environment, and incorporate the following design principles:

- Utilise low energy design strategies;
- Site planning to allow for penetration of beneficial breezes and daylight;
- Appropriate orientation;
- Focus on landscape, including integration with street planting. Emphasis on meaningful integration of vegetation with built form including deep planting and planting in general;
- Water response – harvesting, water quality to support building integrated vegetation;
- Utilising low-water design strategies in building services
- Promotion of strong connection between indoors and outdoors;
- Shaded outdoor space for building tenants and users;
- Balconies or other small scale break out spaces (including covered areas);
- Lesser building footprint with more overhangs and shade;
- Shading of windows / balconies; and
- Utilise appropriate materials and colours in terms of reflectance (to minimise light, heat and UVR), durability and serviceability for the subtropical climate.

## 3 COMMENTS ON THE DRAFT CITY CENTRE NEIGHBOURHOOD PLAN

### 3.1 Introduction

The purpose of this section is to review and critique the draft City Centre Neighbourhood Plan to highlight the integration of subtropical design aspects in the draft Neighbourhood Plan. This section sets out:

- Identification of where subtropical design outcomes have been incorporated into the draft Neighbourhood Plan;
- Any improvements as to how subtropical design principles and outcomes could be better expressed or explained.

### 3.2 Evaluation and Comment

#### 3.2.1 Overview

Council is to be congratulated on the specific inclusion of subtropical design aspects within the draft City Centre Neighbourhood Plan. In addition, the Centre for Subtropical Design offers its support for better incorporating subtropical design outcomes within the draft City Centre Neighbourhood Plan.

The following section sets out a critique and constructive dialogue about where subtropical design principles are included in the draft Neighbourhood Plan, and where the draft Neighbourhood Plan may be able to be improved to address subtropical design. Each part of the draft City Centre Neighbourhood Plan is outlined below

#### 3.2.2 Section 3.3 Vision

The vision includes all aspects that make up subtropical design in a neighbourhood.

Point (j) states a City Centre with distinct subtropical character.

It is recommend that the Neighbourhood Plan expand upon what is considered subtropical character in the City Centre so it is clear to the community, developers and Council as to what that character is and therefore what is expected. This could occur in amendments to '3.4.7 A City Centre that responds to its subtropical climate'.

#### 3.2.3 Section 3.4 Development Outcomes

##### *Section 3.4.2 The history and public spaces of the City Centre are respected*

The history and public spaces in Brisbane's City Centre contribute to the subtropical character. Council is to be commended on the statements made in this section to protect and maintain the historic features of a precinct and the visual amenity and function of particular streetscapes.

### *Section 3.4.3 A Vital City Centre*

One aspect of the subtropical design is to create smaller building footprints. This in turn creates more spaces for pedestrian movement, recreation and landscaping. Council is to be commended on the statement made in this section particularly in relation to paragraph three that reports on the need for smaller site cover to achieve adequate spaces between buildings. Strong statements are supported in this section regarding a city that is less reliant on the private motor vehicle.

### *Section 3.4.4 The City Centre provides a high quality pedestrian and public domain experience*

A subtropical neighbourhood has walkable journeys that are comfortable. The Centre for Subtropical Design strongly supports the statements made in this section regarding the pedestrian environments envisaged in the City Centre. It is vital that the pedestrian environment is comfortable and pedestrian traffic and outdoor stays are shaded/sheltered to take account of Brisbane's climate.

The need for cross-block links to increase permeability in the City Centre for pedestrians is supported.

The second last paragraph, point (f) suggests that new development is landscaped with subtropical vegetation. It is recommended that the Neighbourhood Plan or Planting Species Planning Scheme Policy more clearly define what subtropical vegetation is.

**The second last paragraph, point (h) lists subtropical design as a functional element to be included in new development. Please note that the some of the items already refer to subtropical design elements. It is recommended that the list of items be strengthened to include all aspects of subtropical design and the introductory sentence leading into the dot points includes the words subtropical design.**

### *Section 3.4.5 Excellent Design in all buildings and places and Section 3.4.6 Appropriate High Density Living*

The Centre for Subtropical Design supports the statements made in these sections. Application of subtropical design principles offer innovative solutions to functional responses regarding acoustic considerations and energy usage, and so on.

### *Section 3.4.7 A City Centre that responds to its subtropical climate*

This section of the draft City Centre Neighbourhood Plan is strongly supported. Council is to be commended on including subtropical design aspects in the broader strategic sections of the draft Neighbourhood Plan.

However, this section may be improved by more explicit subtropical design outcomes. As an example, the second paragraph regarding subtropical design of buildings could be expanded to include reference to responses such as 'layering' or filtering, such as may be provided by colonnades or external structures supporting shading strategies as opposed to curtain walling, integration of the building with the landscape, shading of windows and balconies, well ventilated buildings, and smaller site cover to provide useable spaces for recreation, pedestrian movement, and landscaping.

### *Section 3.4.8 Centre of the River City*

The principle, 'subtropical neighbourhood has a distinctive relationship to its site and its landscape', supports the statements in this section. It is vital that the relationship that the city has with the river is maintained and protected, and enhanced in particular areas of the city centre such as Special Context Areas 2, 4, 5 and 7, Map G). This section would also benefit from acknowledgement of the contribution the river, as urban open space, makes to the city's population's quality of life, and that any development in these areas should neither decrease open space provisions nor negate open space linkages. The social and environmental role of urban open space in these areas should be privileged over intense development.

#### *3.2.4 Section 5 Performance Criteria, Acceptable Solutions and Specific Development Outcomes*

The following section provides comments on the detailed performance criteria and acceptable solutions.

##### *Acceptable Solution (AS) A4*

The identified need to protect the values and integrity of the Heritage Places on the City Centre is supported. The Heritage places in the City Centre are an important contributor to the subtropical character of Brisbane.

##### *Acceptable Solution AS7.2*

The restriction of the site cover to achieve space around the buildings is supported in this part of the city.

##### *Performance Criteria P8*

The Centre supports the statements in dot point three in relation to the orientation and shape of buildings that optimises the space between towers for light penetration, air circulation, outlook and amenity.

##### *Performance Criteria P12*

Recommend that this Performance Criteria be reworded to be clearer and provide stronger guidance for assessable development.

##### *Acceptable Solution AS14.3*

This acceptable Solution is supported, as subtropical design requires space between buildings to allow for light, ventilation and landscaping.

##### *Acceptable Solution AS15*

The use of screens to windows must be applied with caution. When intended to be applied for privacy control, a design conundrum exists – the closer the screens to the observer, the easier to see through without being seen. Screens can also be associated with solar control or can mitigate against good air movement or cross ventilation. Thus, the appropriate design of screens is important.



### *Performance Criteria P16*

The statements in this Performance Criteria are strongly supported, however the potential contribution of roof gardens or other 'external surfaces' needs to be clearer and stronger.

### *Acceptable Solution AS16.5*

The use of roof tops for open space and recreation is supported however the term 'significantly dedicated' needs further explanation.

### *Performance Criteria P17*

Clearly, fenestration and sun control are significant aspects of building design in these latitudes.

Performance Criteria 17 is supported, but could be greatly strengthened with a stronger focus on Acceptable Solutions to outline some design specific responses for Council and applicants to maintain a more effective dialogue about these issues.

### *Performance Criteria P18*

This Performance Criteria is supported however should be strengthened by including the core quality of the subtropical city in conjunction with Asian Pacific identity.

### *Performance Criteria P19*

Performance Criteria 19 is supported however the Acceptable Solution does not reflect the character elements as reported in the Performance Criteria. Recommend that the Acceptable Solution be amended to include a reference to durable materials that can withstand the climate and conditions of Brisbane, and a material and colours palette that reflects the subtropical design of Brisbane.

### *Performance Criteria P20*

The Centre supports this criterion which seeks to minimise reflectance of heat, light and UVR which may detrimentally affect the general surroundings of buildings. We also identify the conundrum facing designers between minimising 'solar heat gain' to buildings' interiors while simultaneously minimising 'heat shedding' to exteriors.

### *Acceptable Solution AS20*

The Centre recommends that the terminology 'reflectivity' and 'transmission' be checked for accuracy in this context.

### *Performance Criteria P21*

The Centre recommends that the statement be strengthened and clearer to enable a clear assessment for Council assessment officers and applicants.

### *Acceptable Solutions AS23.1 to AS23.3*

These Acceptable Solutions are supported given that the focus is the contribution of development to an active podium and street. A long term view of adaptive re-use of car parks may be applicable here given that the future of transport needs may change dramatically. Opportunities to provide natural light and below grade spaces should be encouraged.

### *Performance Criteria P24*

The Centre strongly supports the performance criterion that focuses on the creation of active, pedestrian environments.

### *Performance Criteria P25 and Acceptable Solution AS25*

Subtropical design requires subtropical streets that are comfortable for pedestrians. Support the need to minimise a development creating adverse wind impacts. Recommend that the statement be strengthened with minimum requirements so it is clearer to Councils Assessment Officers and Applicants. Also clarify and state who is a suitably qualified person.

### *Performance Criteria P26*

The Centre strongly supports the performance criterion that focuses on the creation of active, pedestrian environments.

### *Acceptable Solution AS27.1*

The Centre recommends that reference to small public spaces be amended to specify a minimum area (which could be a percentage of the site area). This will give clarity to Councils assessment officers and applicants. A minimum space is required to ensure that the space provided for public use is useable.

### *Acceptable Solution AS27.2*

The Centre recommends that this Acceptable Solution be strengthened to ensure that the space is designed with subtropical design elements including shade in summer, sunlight in winter, subtropical vegetation and shade trees.

### *Acceptable Solution AS28.1*

This Acceptable Solution is supported; however it could be strengthened to specify that the cross block links are publicly accessible.

### *Performance Criteria P33 and Acceptable Solution AS33.1-AS33.5*

The statements in this Performance Criteria and acceptable solutions are strongly supported.

### *Performance Criteria P35*

The Centre particularly supports this criterion.

### *Acceptable Solution AS35.1*

The Centre recommends cross checking Map F with Map C.

### *Acceptable Solution AS35.3*

The Centre recommends that the last dot point regarding free-standing is amended to suggest acceptable types of lightweight materials.

### *Performance Criteria P36*

The Centre supports the Performance Criteria and Acceptable Solution in relation to protecting the sunshine provided in winter in the key public areas and squares in the City Centre.

### *Performance Criteria P39*

Performance Criteria 39 could be improved by better defining what is a capital city standard. Reference is made to subtropical design and image twice in the Performance Criteria. It is recommended that P39 is reworded to strengthen the intention of the existing text and to be more specific about what is envisaged for subtropical landscape design in the City Centre. It is recommended that minimum standards or requirements are developed and included as Acceptable Solutions.

A subtropical approach does not automatically imply 'informality' and this term should be used with caution. Arbours may be a useful device and a potential 'acceptable solution', however are not exclusive to subtropical landscape design.

### *Performance Criteria P40*

It is recommended that a subtropical palette and subtropical boulevard is defined. Confirm that the Centres Detail Design Manual and its Street Tree Master Plan refer to subtropical design. This aspect should also note the potential for street trees to provide small scale solutions to stormwater treatment in urban areas, and conversely, for stormwater solutions to provide a water and nutrient regime to ensure street trees live and thrive.

### *Acceptable Solution AS42*

The Acceptable Solution 42 could be strengthened to more specific and measurable. Dot point two refers to 'a number of units and living area windows orientated to within 20°'. Recommend that a minimum requirement (egg. percentage) could be specified rather than a 'number'. Sun shading that is adjustable for time of day and time of year should also be encouraged.

### *Acceptable Solution AS45.2*

Assuming 'open space' means outdoor space, then this Acceptable Solution may be ambiguous because a communal recreation space 'in' a building does not suggest natural light and ventilation.

#### *Acceptable Solution AS50.1*

The reduction in car parking requirements in the City Centre is supported from a subtropical design point of view because of the potential to gain a higher quality, pedestrian focussed public realm.

#### *Performance Criteria P54*

This is obviously a key criterion, and one supported by other performance requirements through the document.

#### *Acceptable Solution AS54*

The requirements included in this Acceptable Solution to achieve subtropical design in the building form are strongly supported. It is recommended that the following requirements are added:

- Cross ventilation;
- Shaded outdoor spaces; and
- Shading of windows and balconies.

#### *Acceptable Solution AS55*

Recommend that a subtropical planting palette is defined and reword the Acceptable Solution to be clearer about the intention.

#### *Performance Criteria P59*

Queen Street Mall is a key pedestrian area in the City Centre. The Centre supports the requirements of this Performance Criteria to facilitate a high degree of pedestrian amenity and shopper convenience.

#### *Acceptable Solution AS65.1 and AS65.2*

A Subtropical Neighbourhood creates sites for subtropical buildings. The protection of the Customs House and its setting along the river is supported.

#### *Performance Criteria P70*

The requirements in this Performance Criteria to enhance the pedestrian environment in SCA 3, and improving the connection with the City Centre and the Valley are supported.

#### *Performance Criteria P74*

Support the need to improve the area of the City Centre referred to as NorthBank and the stated performance criteria cross referenced with Performance Criteria 49. However it is also important to note the high value of open space which is the river, and any attempts to narrow / diminish the channel should be resisted.

### *Performance Criteria P75*

Dot point one can be improved by cross reference to Performance Criteria 18 and our comments on Performance Criteria 18.

### *Performance Criteria P77*

Support the need to integrate Central Station and public areas but reiterate the need to privilege natural light to subterranean space.

### *Acceptable Solution AS78*

The intention is not clear.

### *Acceptable Solution AS80.1*

The Centre for Subtropical Design supports the requirement for pedestrian and cyclist links. It is recommended to specify that the links are vegetated wherever possible to provide shade for pedestrians and cyclists, and that multiple links / pathways are required.

### *Acceptable Solution AS87*

This acceptable solution is supported to maintain strong pedestrian corridors between the City Centre Roma Street Parklands.

### *Acceptable Solution AS94*

Post Office Square and Anzac Square are supported to continue as vital spaces in the City Centre neighbourhood to provide open 'breathing' space especially for office workers at lunchtime. They also contribute to the subtropical character of the City Centre, and provide outstanding vistas towards key heritage buildings of the city.

## 4 CONCLUSION AND RECOMMENDATIONS

### 4.1 Conclusion and Recommendations

Council is to be congratulated on the inclusion of subtropical design aspects within the draft City Centre Neighbourhood Plan. The draft City Centre Neighbourhood Plan has been relatively successful in integrating subtropical design principles and elements and has, on the whole, addressed many subtropical design aspects. In particular the following aspects are supported within the draft City Centre Local Plan:

- The vision statement for the city and what the 'high level' outcomes should be;
- The detailed Development Outcomes, and the planning principles and neighbourhood design principles that are inherent in this part of the document, progressing the City Centre Master Plan work completed by Council to date;
- The recognition that different parts of the CBD have different character – and the attempts to integrate that character of various parts of the city with new development outcomes;
- The focus on the character and heritage elements of the city, as key drivers for streetscape, scale and cultural expression in the city;
- The recognition of our greenspaces, both large and small, as key aspects to the shape, function, structure, lifestyle and outlook of our city; and
- The extent of detail contained in the draft City Centre Neighbourhood Plan's performance criteria and acceptable solutions, and in particular, the focus on seeking to put broader concepts into detailed requirements for city centre development.

The Centre for Subtropical Design recommends the following considerations and amendments for the finalisation of the draft City Centre Neighbourhood Plan:

- Defining subtropical design/character. Subtropical design is recognised as a key aspect of the vision and development outcomes for the city. However, the description in Section 3.4.7 of the document could be more focussed on the built form outcomes that a focus on subtropical design outcomes can bring. The use of the words 'subtropical design' would then have more meaning in the balance of the draft neighbourhood plan and would provide a far more robust position if the Council is seeking to achieve subtropical design outcomes;
- Defining a subtropical landscape palette for the City Centre. The draft neighbourhood plan would be strengthened by the inclusion of more specific guidance on tree species relevant to the city centre, either within the draft City Centre Neighbourhood Plan or within a related planning scheme policy;
- Although the inclusion of specific subtropical design elements in the performance criteria and acceptable solutions are supported, a greater emphasis on the detail provided in the Acceptable Solutions is warranted. That is, it would be useful for applicants, planners, architects and Council officers to understand some more specific solutions as to how the broader subtropical design principles can influence detailed design outcomes;
- Subtropical design principles that have not been included in the draft Neighbourhood Plan include the importance of having a water responsive building design and neighbourhood. Consequently where possible the incorporation of minimum standards for harvesting of water and the reuse of that water could be investigated for inclusion into the statutory document – or as part of Council's broader policies on sustainable development. The recently completed

Brisbane Square building has achieved commendable water conservation in the design of the building, and lessons from this and other buildings could assist in achieving far more water sensitive design outcomes;

- Finally, we recommend that more opportunities for open space in the city be consciously designed into the urban fabric as integral components of both the public and private domain, and not be left to chance as a 'by-product' of development.

The Centre for Subtropical Design is keen to maintain a dialogue with Council concerning its finalisation of the City Centre Neighbourhood Plan. The Centre has as its basis a strong commitment and focus on achieving subtropical design outcomes, and would welcome further dialogue, workshops or reports to assist the Council in finalising the Neighbourhood Plan.