Brisbane City Plan 2014

Amendment Q - Planning scheme policy amendment

1 Guide to this document

(a) In this document, proposed amendments to *Brisbane City Plan 2014* are detailed as follows:

(i) in the Schedule of text amendments:
(A) text identified in strikethrough and red highlight (e.g. ~~example~~) represents text to be omitted
(B) text identified in underlining and green highlight (e.g. example) represents text to be inserted

(b) Text that is preceded by the heading 'Reason for change' does not form part of the proposed amendment and is included as explanatory information about the reason for the proposed amendment only.

Part 1 About the planning scheme

Table 1.2.6—Planning scheme policies that support the planning scheme

Reason for change: To include the new Subtropical building design planning scheme policy in the planning scheme. Constitutes a minor amendment to a planning scheme in accordance with Schedule 1, section 2(f).

Air quality planning scheme policy
Biodiversity areas planning scheme policy
Bushfire planning scheme policy
Coastal hazard planning scheme policy
Commercial character building planning scheme policy
Compensatory earthworks planning scheme policy
Concrete batching plants planning scheme policy
Consultation planning scheme policy
Crime prevention through environmental design planning scheme policy
Flood planning scheme policy
Graffiti prevention planning scheme policy
Heritage planning scheme policy
Independent design advisory panel planning scheme policy
Industrial hazard and risk assessment planning scheme policy
Infrastructure design planning scheme policy
Landscape design planning scheme policy
Landslide planning scheme policy
Management of hazardous chemicals in flood affected areas planning scheme policy
Management plans planning scheme policy
Noise impact assessment planning scheme policy
Offsets planning scheme policy
Park management plan planning scheme policy
Planting species planning scheme policy
Potential and actual acid sulfate soils planning scheme policy
Refuse planning scheme policy
Social and health impact assessment planning scheme policy
Storage and dispensing of petroleum products planning scheme policy
Structure planning planning scheme policy
Subtropical building design planning scheme policy
Traditional building character planning scheme policy
Transport, access, parking and servicing planning scheme policy
Transport air quality corridor planning scheme policy
Vegetation planning scheme policy

Schedule 6 Planning scheme policies \ SC6.1 Planning scheme policy index

Table SC6.1.1—Planning scheme policy index

Reason for change: To include a new planning scheme policy in the list of planning scheme policies.

SC6.29A	Subtropical building design planning scheme policy

Schedule 6 Planning scheme policies \ SC6.29A Subtropical building design planning scheme policy

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy

SC6.29A Subtropical building design planning scheme policy

Contents

1 Introduction

1.1 Relationship to planning scheme

This planning scheme policy:

a. provides information the Council may request for a development application;
b. states a standard for an assessment benchmark or provides guidance or advice about satisfying an assessment benchmark, which identifies this planning scheme policy as providing that standard, guidance or advice.

1.2 Purpose

1. This planning scheme policy provides further information and guidance for subtropical design elements and supporting principles to ensure that development for residential and non-residential uses support Brisbane's subtropical character, sustainable lifestyle and exhibit design excellence. The further information and guidance provided in this planning scheme policy will support assessment benchmarks relating to subtropical design and landscaping in the following codes:
    a. Community facilities code;
    b. Centre or mixed used code;
    c. Multiple dwelling code;
    d. Retirement and residential care facility code;
    e. Specialised centre code;
    f. Landscape work code;
    g. Subdivision code.

Note—Where development is in the Specialised centre zone, the further information and guidance in this planning scheme policy is applicable only to development in the Entertainment and conference centre zone precinct, the Large format retail zone precinct, the Major education and research facility zone precinct and the Mixed industry and business zone precinct.

2. This planning scheme policy provides further information and guidance for subtropical design elements and supporting principles to facilitate climate responsive design for buildings and outdoor spaces. These elements include:
    a. orient yourself
    b. occupy outdoor spaces;
    c. natural daylight and ventilation;
    d. shade and protection;
    e. living greenery;
    f. identity matters;
    g. reduce energy and waste.

Reason for change: Post consultation change. New planning information for clarification.

3. This planning scheme policy must be read in conjunction with all applicable requirements in the planning scheme or planning scheme policies that may affect the design of development. The subtropical design elements of this planning scheme policy do not override the requirements of other planning scheme policies.

Reason for change: Post consultation change, renumbering.

4. Other planning scheme policies provide further information and guidance on some aspects discussed in this planning scheme policy and should be read in conjunction with the information provided, to ensure that subtropical design and landscaping outcomes for buildings and outdoor spaces can be achieved. Where relevant, these planning scheme policies have been identified in the respective section of this planning scheme policy.

Reason for change: Post consultation change, changed from Note to point 5. In response to submissions.

5. Information and guidance provided in this planning scheme policy is for amenity and aesthetic purposes to support subtropical design outcomes for residential and non-residential uses. Any approach taken to comply with the assessment benchmarks identified in the relevant codes and supported by further information and guidance in this planning scheme policy must not result in non-compliance with the *Building Act 1975* or other relevant building assessment provisions.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

Note—The New World City Design Guide - Buildings that Breathe includes guidance for subtropical design that does not make up the further information or guidance provided in this planning scheme policy. The New World City Design Guide - Buildings that Breathe sets out the vision, design elements and best practice case studies to guide new development. Development is encouraged to incorporate these design elements and embrace the city's subtropical climate.

Reason for change: Post consultation change, In response to submissions.

Note—All figures are for illustration purposes only. The figures provide examples of how subtropical building design principles and concepts may be achieved and carried out in broad design terms. Figures are not to scale and are not intended to be used to measure compliance with aspects of the Building Act 1975 or other relevant building assessment provisions.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

1.3 Terminology

Reason for change: Post consultation changes. Cross ventilation, double loaded floorplates, ecosystem services and sky terrace changed and natural ventilation and stack ventilation added in response to submissions. Atrium description changed in response to new planning information.

In this planning scheme policy, unless the context or subject matter otherwise indicates or requires, a term has the following meaning:
atrium: an architectural design element that provides an open air, or a skylight covered void that can be partially or completely wrapped by a building's floorplate across two or more levels. Refer to section 3.4 for further information.
breezeway: an architectural design element similar to a hallway that is not fully enclosed, allowing breezes to pass through and provide for design variation.
city room: an architectural design element located on the ground floor of a building that delivers a semi-outdoor space to provide a connection between the private and public realm. Refer to section 3.1 for further information.
cross ventilation: the direct, unimpeded wind driven flow of air through an internal space. Cross-ventilation requires openings from outdoor areas for inlet and outlet. (No outlet = no airflow).
design element: an element of subtropical design from the New World City Design Guide - Buildings that Breathe.
design excellence: the functional, connected and inclusive public spaces and well designed buildings and structures that make a positive contribution to the city and local community. Design that delivers high quality design processes and outcomes for the city across all scales of development. This is achieved through the adoption of a design led process, collaborating across a multidisciplinary team, and engaging with the community and stakeholders.

double loaded floorplates: floorplate configurations where units or individual tenancies are arranged on two or more sides of a common central corridor, with no separation or break in the built form.
ecosystem services: benefits that people obtain from ecosystems. The benefits from ecosystem services can either be provisioning, regulating, cultural or spiritual. For example, increasing biodiversity, regulating urban temperature, creating a sense of place and well-being, food production.
hard landscaping: is an area, element or feature of landscaping that does not include or support the growth of vegetation. Examples of hard landscaping include concrete, tiles, stepping stones, pavers, decks, artificial plants, artificial turf or synthetic grass, rubber matting and pools or other water features. Refer to the Landscape design planning scheme policy for further detail.
human scale design: a design concept that ensures the design of buildings and public spaces is aligned and does not conflict with the physical or cognitive perceptions of humans in the built environment.
natural ventilation: includes both cross-ventilation (wind-driven airflow) and stack-ventilation (buoyancy-driven airflow). For airflow through an individual unit or tenancy, two openings are required, whether in opposite walls (ideal), adjacent walls, or in the same wall (least ideal), or in a wall and a roof vent or skylight. A single opening in a single wall is ineffectual for air flow, even in strong wind.
occupant: the expected building occupant or user of the building or outdoor space. An occupant may include a resident, employee or visitor.
outdoor spaces: may include private open space, communal open space and areas of the public realm provided by new development that are not predominantly enclosed.
recessed podium: an architectural design element that delivers a semi-outdoor podium design to provide a seamless connection between the private and public realm. Refer to section 3.5 for further information.
single loaded floorplate: floorplate layouts that do not include a stacked layout of units or individual tenancies, with these spaces being separated by a break in the built form.
sky terrace: an architectural design element located on the rooftop of a podium or tower or integrated into tower design, preferably covered or semi-covered, featuring vegetation and architectural elements (which can be discerned from street level or beyond), that provides an aerial connection between the private and public realm. Refer to section 3.2 for further information.
soft landscaping: is an area, element or feature of landscaping that is planted with and supports the growth of vegetation. Examples of soft landscaping include garden beds, raised planters or artificial growing environments. Refer to the Landscape design planning scheme policy for further detail.
stack ventilation: buoyancy-driven airflow through a building where rising hot air escapes through a higher point than the inlet opening, such as in an atrium.
subtropical design principle: a standard subtropical design principle that can assist in facilitating climate responsive design for buildings and outdoor spaces.
urban context analysis: a preliminary site analysis undertaken prior to the design of the deBvelopment, identifying unique site-specific circumstances, including key opportunities and constraints that can be considered in the design response. Refer to section 2.1 for further information.
wintergarden: a partly or fully enclosed glazed internal conservatory space that does not include operable subtropical design components such as windows, doors and walls.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

2 Orient yourself

2.1 Location and orientation

1. The location and orientation of buildings and outdoor spaces is a critical component of subtropical design and will impact on the ability for new development to contribute to Brisbane's subtropical character and sustainable lifestyle. Location and orientation considers the context, position and dimension of buildings and outdoor spaces on a development site to support climate responsive design and improve occupant amenity. The location and orientation of buildings and outdoors spaces should be considered early in the design process as it will have the greatest impact on the implementation and success of other subtropical design elements and supporting principles

discussed in this planning scheme policy. These elements include:

a. occupy outdoor spaces;
b. natural daylight and ventilation;
c. shade and protection;
d. living greenery.

2. Prior to the commencement of detailed design, an urban context analysis should be undertaken to determine the optimal location and orientation of buildings and outdoor spaces on a development site. An urban context analysis will ensure that site-specific circumstances are identified and responded to appropriately through a best practice approach that incorporates subtropical design outcomes. An urban context analysis should consider the following elements:
    a. site context and surrounding built form;
    b. solar orientation and prevailing winds;
    c. site topography and other natural features (e.g. water courses, overland flow paths and significant vegetation);
    d. the public realm;
    e. heritage and character values;
    f. active, public and private transport networks;
    g. ultimate development outcomes on adjoining development sites.

Note—An urban context report is only required if outlined by an assessment benchmark in a relevant code. However, undertaking an urban context analysis can assist in demonstrating how the subtropical design elements and supporting principles of this planning scheme policy have been incorporated into the proposed development.

Note—The overlays identified on a site will assist in determining the scope of the policy required to be considered for the urban context analysis.

Note—When considering the ultimate development outcomes of adjoining development sites, consideration should be given to surrounding zones, neighbourhood plans and overlays within proximity to the site, that will influence the overall height, bulk, scale and form of any proposed development.

Reason for change: Post consultation change. In response to submissions and renumbering.

3. The findings of an urban context analysis should be used as the primary source of information when determining the optimal location and orientation of buildings and outdoor spaces and supported by the following subtropical design principles:
    a. the front building facade or building line should be parallel to the front boundary to align frontages, balconies and entries to the street and neighbouring properties to provide a consistent street edge to the public realm;
    b. buildings and outdoor spaces should be located and orientated to minimise western exposure. Where western exposure is unavoidable due to site or development constraints, shading elements such as layered facades, shading forms or devices, shade structures, awnings, colonnades or living greenery should be provided to buildings and outdoor spaces to achieve subtropical design outcomes and improve occupant amenity. Refer to section 5 and section 6 for further information;

c. buildings and outdoor spaces should be orientated to the north to improve solar access and facilitate opportunities for natural daylight and ventilation. Refer to section 4 for further information;
d. the layout of the road network will impact the optimal location and orientation of buildings and outdoor spaces. Where the road network is orientated:
    i. east-west, buildings and outdoor spaces should be orientated north;
    ii. north-south, buildings and outdoor spaces should be positioned to maximise the northern aspect and minimise western exposure to habitable spaces and areas;
e. the layout and design of buildings and outdoor spaces should consider the amenity and privacy needs of development on and adjoining the site. Design approaches such as separating or angling buildings away from adjoining sites or by carefully considering the location and placement of transparent design elements (such as glazing or operable windows) are encouraged to minimise direct overlooking or reliance on screening devices for amenity and privacy. Refer to section 4 for further information;
f. existing significant vegetation should be retained to capitalise on ecosystem service benefits;
g. where possible, buildings and outdoor spaces should also take advantage of immediate and distant views, including those to:
    i. parks or public realm areas that contain a high degree of activity;
    ii. significant vegetation or other ecological features;
    iii. natural landscape features or elements, including waterways;
    iv. significant buildings or structures.

Figure a and Figure b provide guidance for subtropical design principles and their impact on the location and orientation of buildings and outdoor spaces for different built forms.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

Note—The location and orientation of buildings and outdoor spaces to take advantage of immediate and distant views should not compromise the ability of new development to achieve climate responsive design or to incorporate the design elements or principles of this planning scheme policy.

Note—The information and guidance provided in this planning scheme policy for immediate and distant views is different and does not override the requirements of relevant assessment benchmarks, such as those relating to the preservation of views to key landmarks identified in neighbourhood plans.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Structure planning planning scheme policy

Reason for change: Post consultation change to Figure a. In response to submissions and new planning information.

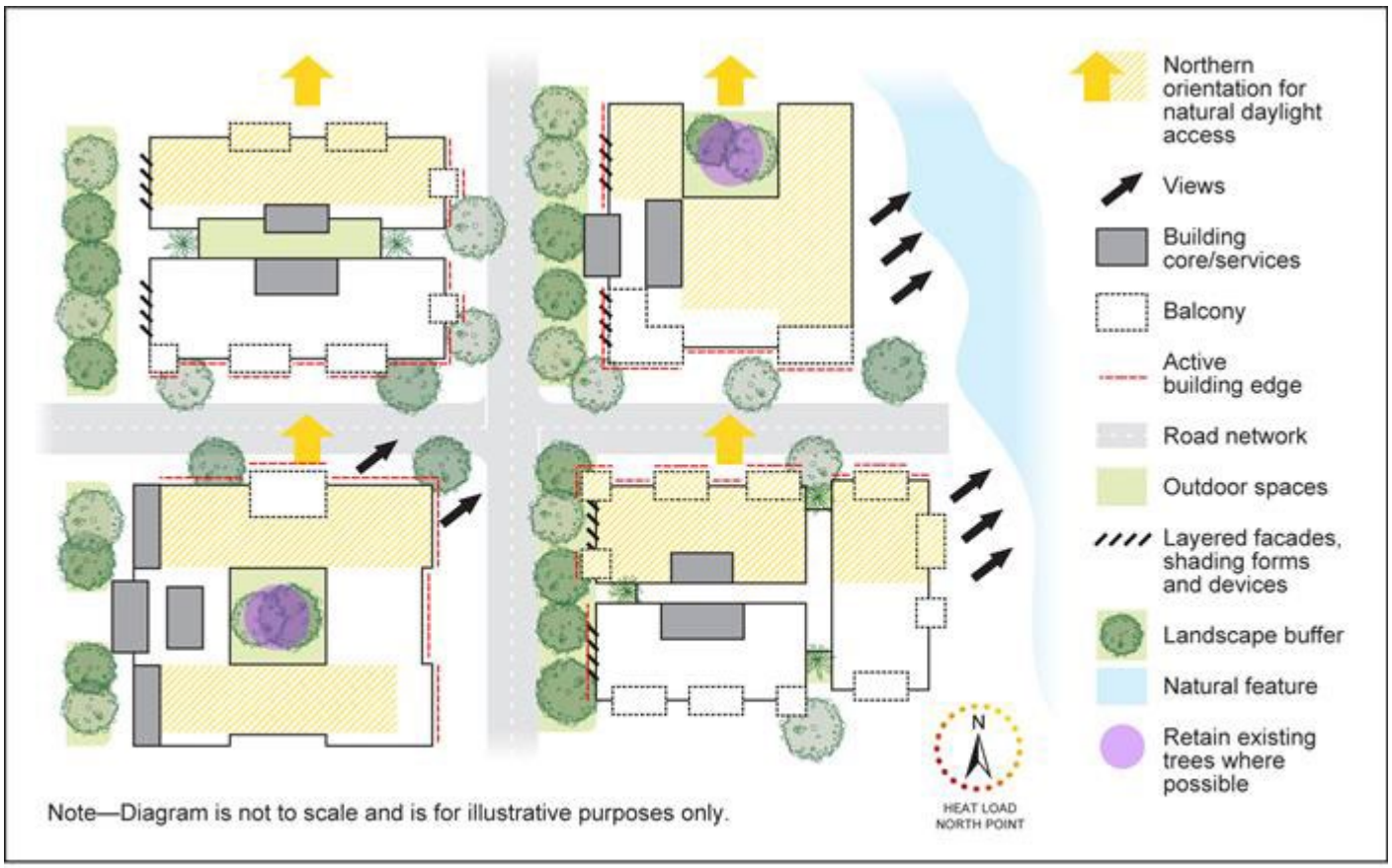

Figure a—Location and orientation subtropical design principles

View the high resolution of Figure a-Location and orientation subtropical design principles

Reason for change: Post consultation change to Figure b. In response to submissions.

Figure b—Location and orientation subtropical design principles – townhouse layout

View the high resolution of Figure b—Location and orientation subtropical design principles - townhouse layout

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

2.2 Internal layout and massing

1. A building's floorplate is required to balance the layout of building elements and occupiable spaces to enable the successful function, operation and use of the proposed development. The layout of building elements and occupiable spaces on the building's floorplate will impact the overall shape and mass of the building, which in turn will affect the ability to provide an appropriate subtropical design response that contributes to Brisbane's subtropical character and sustainable lifestyle. These attributes will also impact the implementation and success of other subtropical design elements and supporting principles discussed in this planning scheme policy, including:
    a. occupy outdoor spaces;
    b. natural daylight and ventilation;
    c. shade and protection;
    d. living greenery.

Note—Building elements are services and utilities required to fulfil the functional requirements of the proposed use and include building services, plant, equipment and circulation cores that provide access between levels.

2. Buildings with rectangular floorplates that provide a greater length to width ratio are better suited to achieving an appropriate subtropical design response, providing greater opportunities to harness natural daylight and ventilation. Although not preferred, buildings with floorplates that have a near equal length to width ratio can support climate responsive design, however, these should be supported by design elements to break down building bulk, scale and form, provide opportunities for natural daylight and ventilation and facilitate climate responsive design. Refer to Figure c for guidance and examples of residential and non-residential floorplate layouts that support climate responsive design.

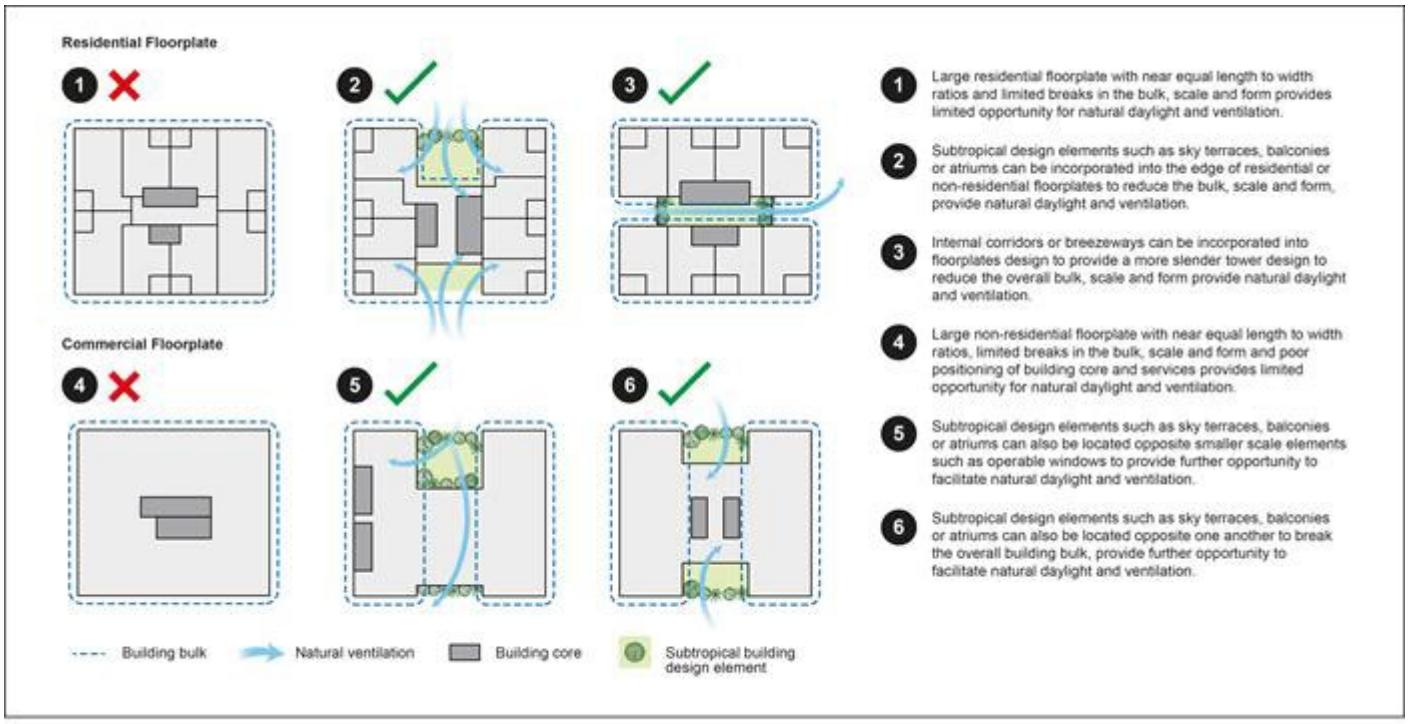

Figure c—Floorplate layouts for subtropical building design - residential and non-residential uses

View the high resolution of Figure c—Floorplate layouts for subtropical building design - residential and non-residential uses

3. For residential uses, single loaded floorplates are the preferred design to reduce the building's bulk, scale and form and provide greater opportunity for natural daylight and ventilation to improve amenity for the building's occupants. Double loaded floorplates can be designed to achieve a similar outcome, however, atriums or breezeways should be incorporated to reduce the bulk, scale and form of the building.

Reason for change: Post consultation change. In response to submissions.

4. For non-residential uses, the layout of a building's floorplate should prioritise the location of building services elements (for example building core, lifts, amenity spaces, stairs, risers/service cupboards, meter rooms, etc) to the western facade or where the building edge is adjacent to an adjoining building. This approach provides greater flexibility in the function and use of the floorplate, while also reducing unwanted solar gain and mitigating unwanted overlooking from adjoining development to occupied areas. Refer to Figure d for guidance.

Reason for change: Post consultation change to Figure d. In response to submissions.

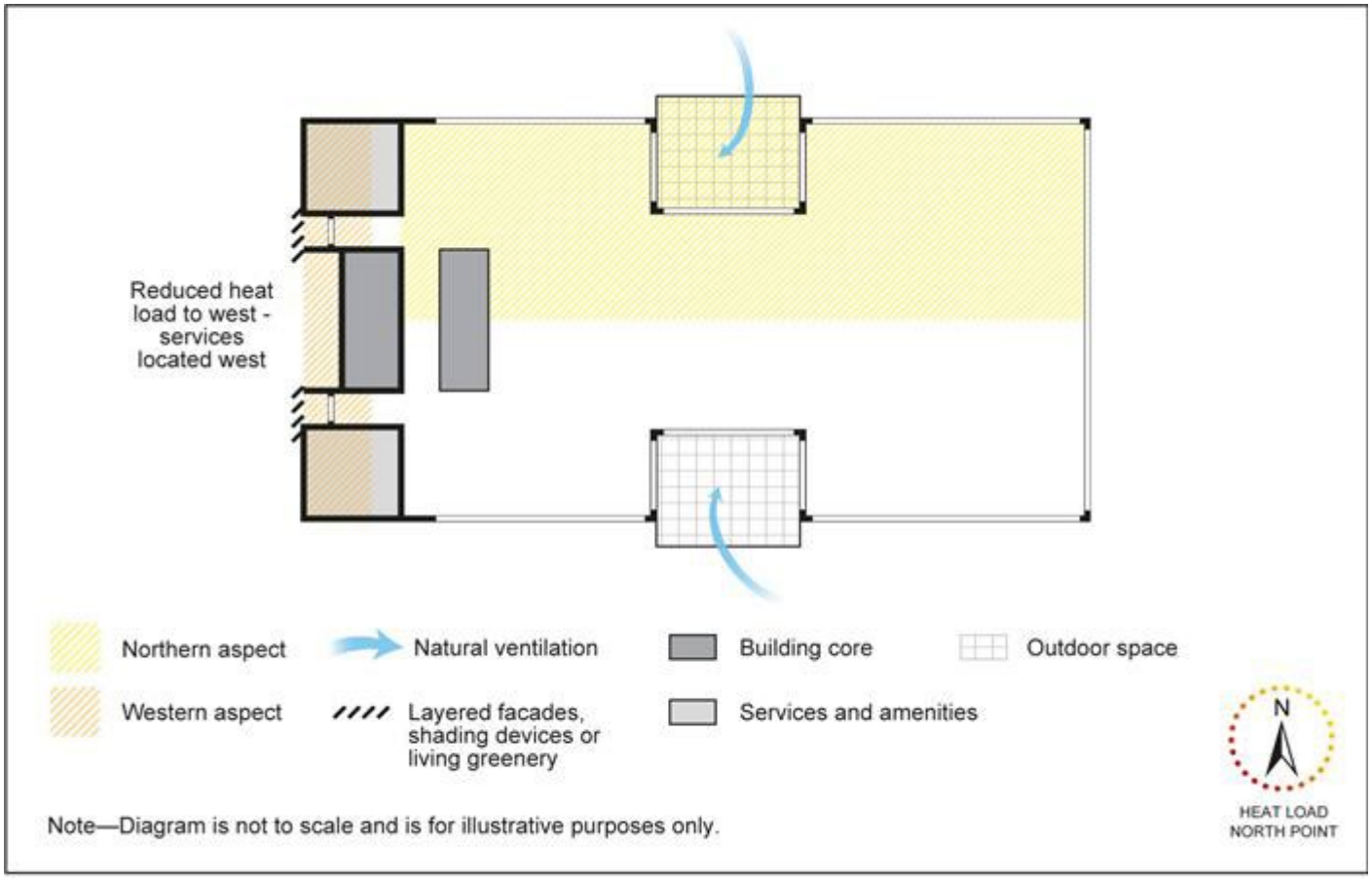

Figure d—Floorplate layout for subtropical building design – Non-residential floorplate

View the high resolution of Figure d—Floorplate layout for subtropical building design - Non-residential floorplate

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

5. For residential uses, the layout of a building's floorplate should centrally locate building elements to push residential dwellings to the perimeter and provide the greatest opportunity for natural daylight and ventilation. Floorplate layouts that result in residential dwellings on the western facade should incorporate design elements such as layered facades, shading forms and devices, structures or living

greenery to mitigate the impacts from increased solar exposure. Refer to Figure e for guidance and section 5 and section 6 for further information.

Reason for change: Post consultation change to Figure e. In response to submissions.

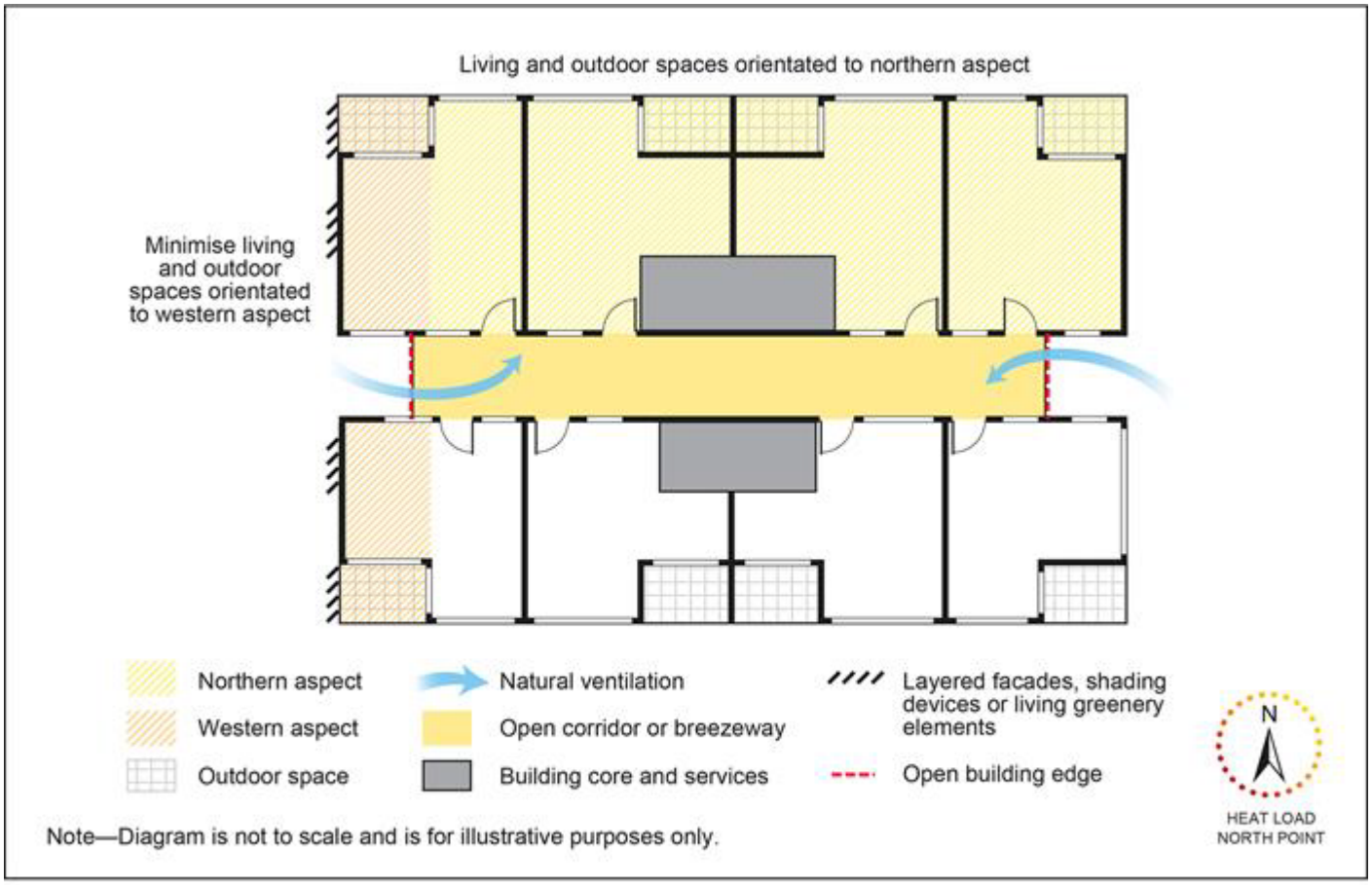

Figure e—Floorplate layout for subtropical building design – Residential floorplate

View the high resolution of Figure e—Floorplate layout for subtropical building design - Residential floorplate

Reason for change: Post consultation change. In response to submissions.

6. The layout of building design elements and occupiable spaces will impact on the bulk, scale and form of development and should be managed to reduce the overall mass of the built form of new development. To assist in further reducing the bulk, scale and form of development design elements that provide modulation and articulation to the roof and wall plane or provide variation to a building's facade can be incorporated. Larger design elements such as city rooms, sky terraces, balconies or atriums can be designed to recess or protrude from the wall plane to reduce the impact of large blank walls and to minimise overall building mass. Alternatively, building facades can be designed to include smaller scaled design elements, such as layered facades, external shading forms or devices and awnings or colonnades to provide variation to the wall plane. These design elements also provide climate responsive building design that harnesses the opportunities for natural daylight and ventilation to improve the amenity of buildings and outdoor spaces. The following strategies can be used to guide their implementation:
    a. city rooms or recessed podiums can be used to minimise the impact of building bulk, scale and form on the ground plane. Refer to section 3.1 and section 3.5 for further information;

b. sky terraces, balconies and atriums on the building edge can be used to minimise the impact of building bulk, scale and form above the ground plane. Refer to section 3.2, section 3.3 and section 3.4 for further information;
c. layered facades, shading forms or devices can be used to provide an articulated depth and material variation to the wall plane. Refer to section 5.1 and section 5.2 for further information;
d. shade structures, awnings and colonnades can also assist in minimising overall building mass and providing a human scale transition to the ground plane. Refer to section 5.3 and section 5.4 for further information.

Figure f provides examples for how some of these elements can reduce the bulk, scale and form of development.

Reason for change: Post consultation change to Figure f. In response to submissions.

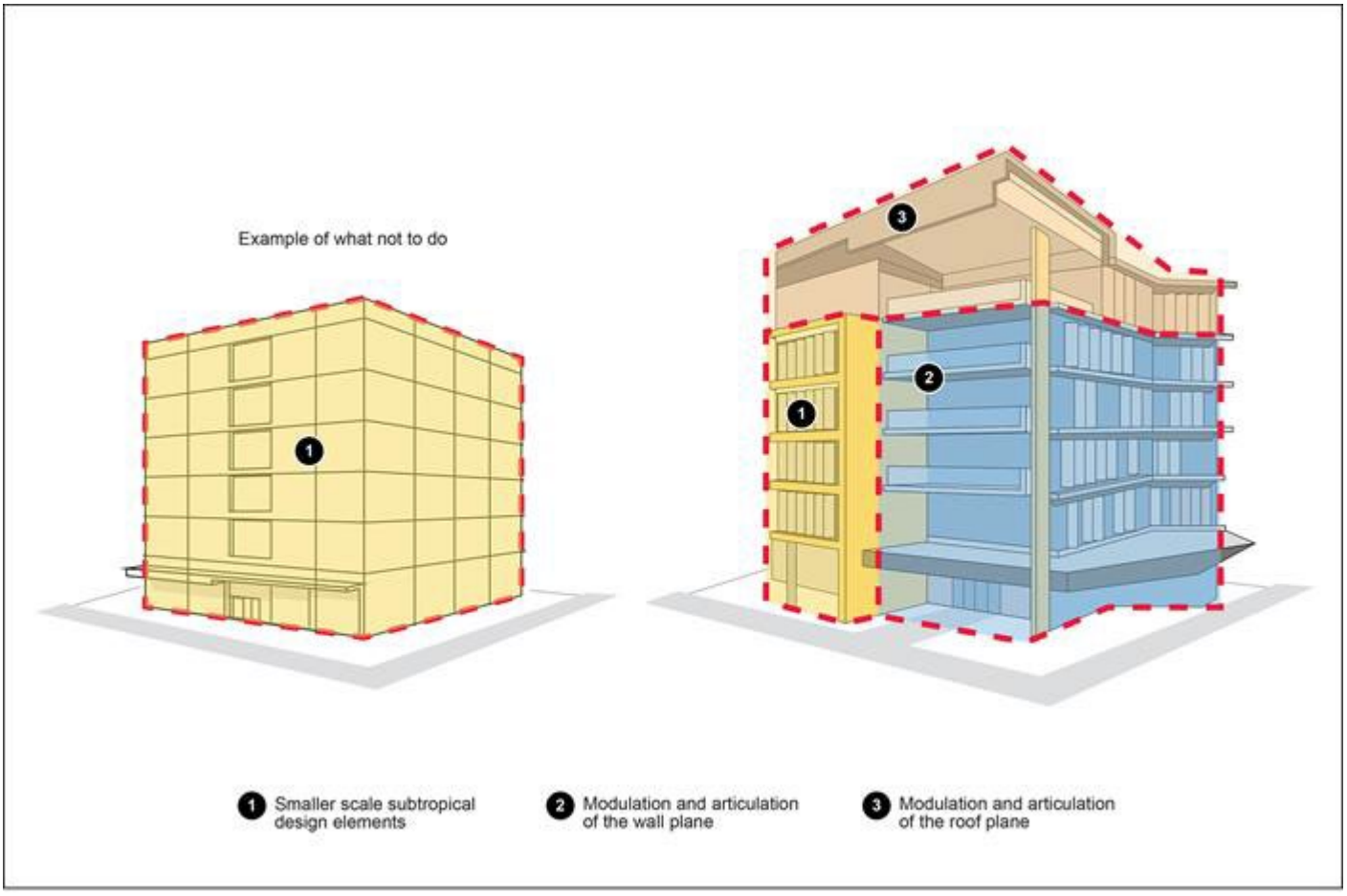

Figure f—Design elements to reduce bulk, scale and form

View the high resolution of Figure f—Design elements to reduce building bulk, scale and form

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

2.3 Street activation

1. Providing street activation is important for ensuring new development contributes to Brisbane's subtropical character and sustainable lifestyle. Street activation can be achieved through careful consideration and design of a building's lower levels and the ground floor to emphasise a physical

and visual connection between the private and public realm. This can be delivered by providing uses and building activities that create a higher degree of interest and activity. The design of a building facade should also promote a visual widening of the street and provide opportunities for casual surveillance.

2. Street activation should be sought if the development is in an appropriate location (such as an appropriate zone) and is identified as a desired outcome of a relevant assessment benchmark. Outcomes sought for street activation should be supported by the findings of an urban context analysis where it is identified as an opportunity to contribute to Brisbane's subtropical character and sustainable lifestyle. Refer to section 2.1 for further information.

Note—Street activation is a design outcome sought by relevant assessment benchmarks in specific development codes, neighbourhood plan codes or the Active frontages in residential zones overlay code.

3. When designing the ground floor of a building to facilitate street activation, it is recommended that a minimum 60% of the building edge on the ground floor comprise of an active use space. Active use spaces provide a visual or physical connection between the private and public realm and can include design elements such as city rooms, building edge atriums, laneways and arcades or facades with smaller scale design elements such as glazing, operable windows, doors, operable walls and openings. Active use spaces do not include vehicle access points, solid walls that lack operable components and service facilities or infrastructure.

4. Although the success of street activation will primarily be determined by the design of the ground floor, uses and activities up to the third storey can also contribute to urban vibrancy and provide a visual connection to the ground plane, further connecting the private and public realm and contributing to street activation. Figure g and Figure h provide an examples of how the layout of uses relative to the public realm can provide street activation.

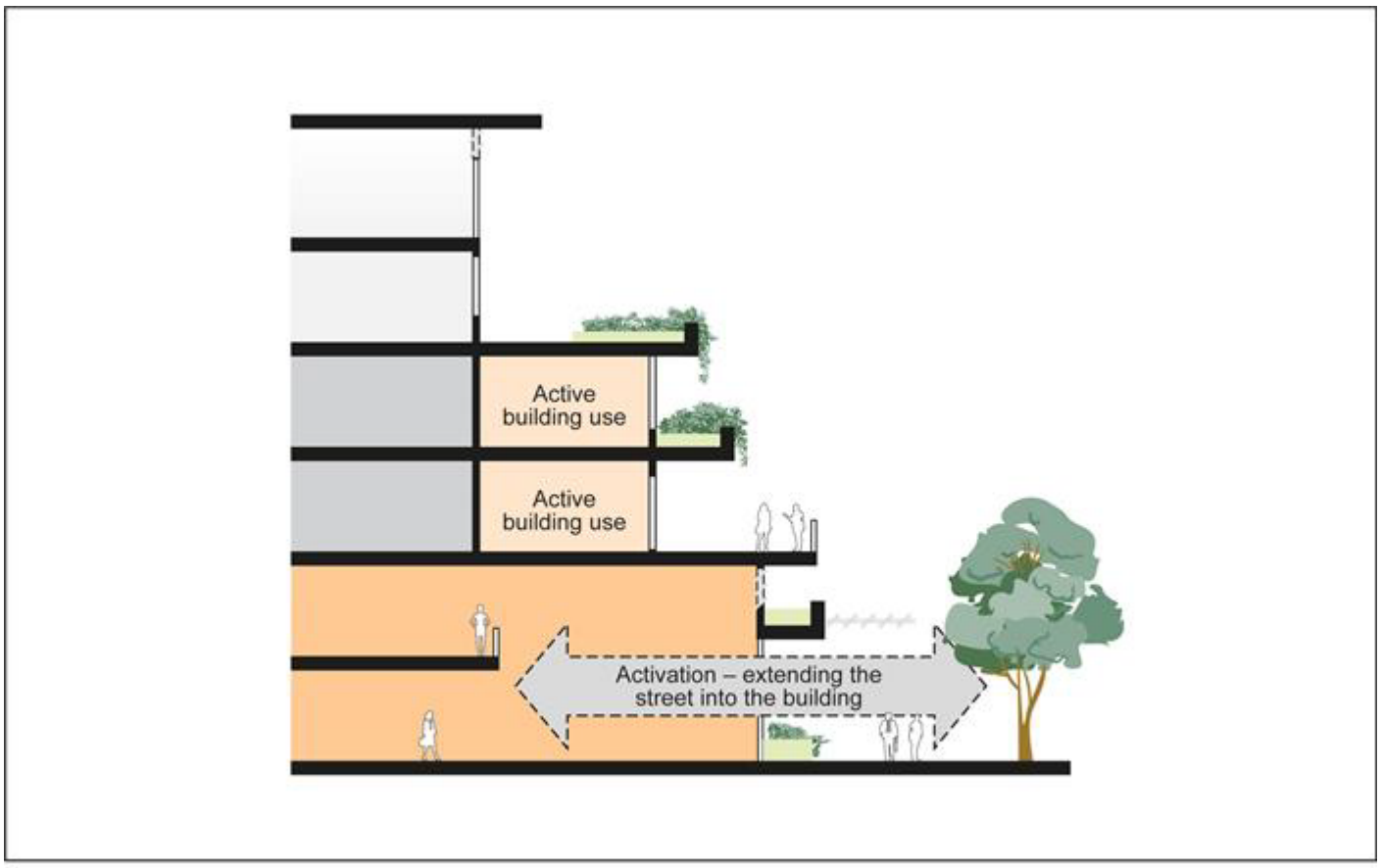

Figure g—Street activation subtropical design principles – Street cross section a

View the high resolution of Figure g—Street activation subtropical design principles – street cross section a

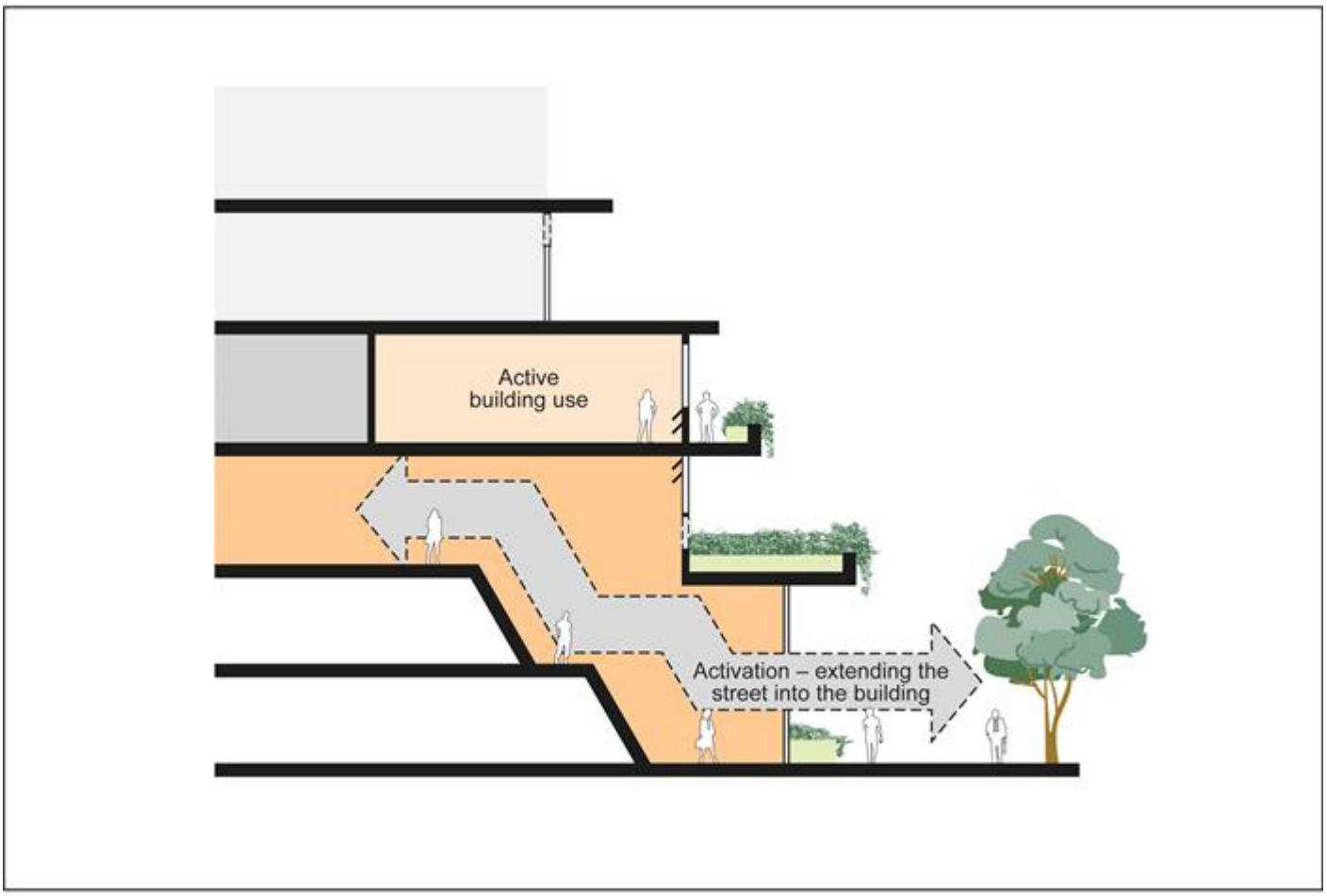

Figure h—Street activation subtropical design principles – street cross section b

View the high resolution of Figure h—Street activation subtropical design principles – street cross section b

5. Street activation can be further supported by incorporating the following design strategies:
    a. floor to ceiling heights on the ground floor should be large enough to accommodate a mezzanine level or provide flexibility and opportunities for transitional uses (such as converting commercial spaces to residential dwellings) over the lifecycle of the building;
    b. significant changes to grades or elevations between the private and public realm should be limited to encourage pedestrian engagement with the built form at the street level. Changes to grades or elevations should be limited to designs where a response to on-site constraints (such as flooding or overland flow) is required. In these instances, changes to grade or elevation should be achieved within the building footprint rather than on the edge of a development site to improve accessibility, interface and legibility between the private and public realm;
    c. the use of operable windows, doors, operable walls and openings should be maximised on the ground floor. Doors and other points of entry should be located at regular intervals and must be visually prominent, legible and aligned with confluences in the pedestrian movement network;
    d. including a mix of tenancy sizes and frontage widths that are designed to ensure a physical and visual connection between the private and public realm;

e. opportunities to include outdoor recreation and amenity spaces to support the function of land uses (such as retail) on the ground floor in the boundary of the site without compromising the function of the public realm are encouraged;
f. the visual prominence of building services and equipment such as fire hydrants, service cabinets and electricity boosters should be minimised and integrated into the built form or subtropical landscape design;
g. design elements such as shade structures, awnings or colonnades should be used to improve weather resilience and the pedestrian experience. Refer to section 5.4 for further information;
h. subtropical landscaping planted in natural ground or artificial growing environments to improve the amenity and aesthetics of the private and public realm is encouraged. Refer to section 6 for further information;
i. public art or creative lighting can improve urban vibrancy through the day and night and encourage street activation at all hours. Refer to section 7 for further information;
j. the design of the private and public realm must ensure the safety and security of property, occupants and the community using crime prevention through environmental design strategies;
k. opportunities to accommodate temporary and adaptable spaces on the ground floor are encouraged.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Infrastructure design planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy

7. Land uses and development activities on the ground floor will impact on the success of street activation. Land uses that promote activity on the street, visual interest, casual surveillance and urban vibrancy throughout the day and night-time are encouraged. The following land uses and activities are considered to provide a greater level of street activation:
    a. residential dwellings that incorporate adaptable ceiling heights;
    b. food and drink outlets such as restaurant and cafes;
    c. offices;
    d. health care service such as medical centres;
    e. indoor sport and recreation, including fitness facilities and gyms;
    f. activities associated with the building, including work from home facilities, in-house activity and recreation areas.

Note—Any proposed use will be subject to the relevant assessment benchmarks required by the relevant code.

Note—In-house activity and recreation areas can provide ground floor activation and can include but are not necessarily limited to, end-of-trip facilities, work from home facilities, gyms, libraries, games rooms, kitchens or dining rooms available only to the occupants of the building.

3 Occupy outdoor spaces

3.1 City room

1. A city room is an architectural design element located on the ground floor of a building that provides a semi-outdoor space to enable a physical and visual connection between the private and public realm. City rooms create a perceived visual widening of the street by encouraging the extension of the street verge into the building, providing ground floor activation, a high level of amenity and improving the overall visual appearance of the development, contributing to Brisbane's sustainability and subtropical lifestyle.

2. City rooms can be used as a subtropical design response for new development in the inner city and suburban centres where a high degree of ground floor activation is sought. This may include development in the centre zone, mixed use zone or specialised centre zone categories. City rooms are not anticipated as a subtropical design response outside of these locations.

3. City rooms can be strategically located to sleeve larger building elements to minimise the dominance of the built form, provide a transition to the streetscape, activate the building facade or accommodate additional land uses and activities that serve building occupants. City rooms can be incorporated into development in both high and low-medium density urban settings. Refer to Figure i for guidance.

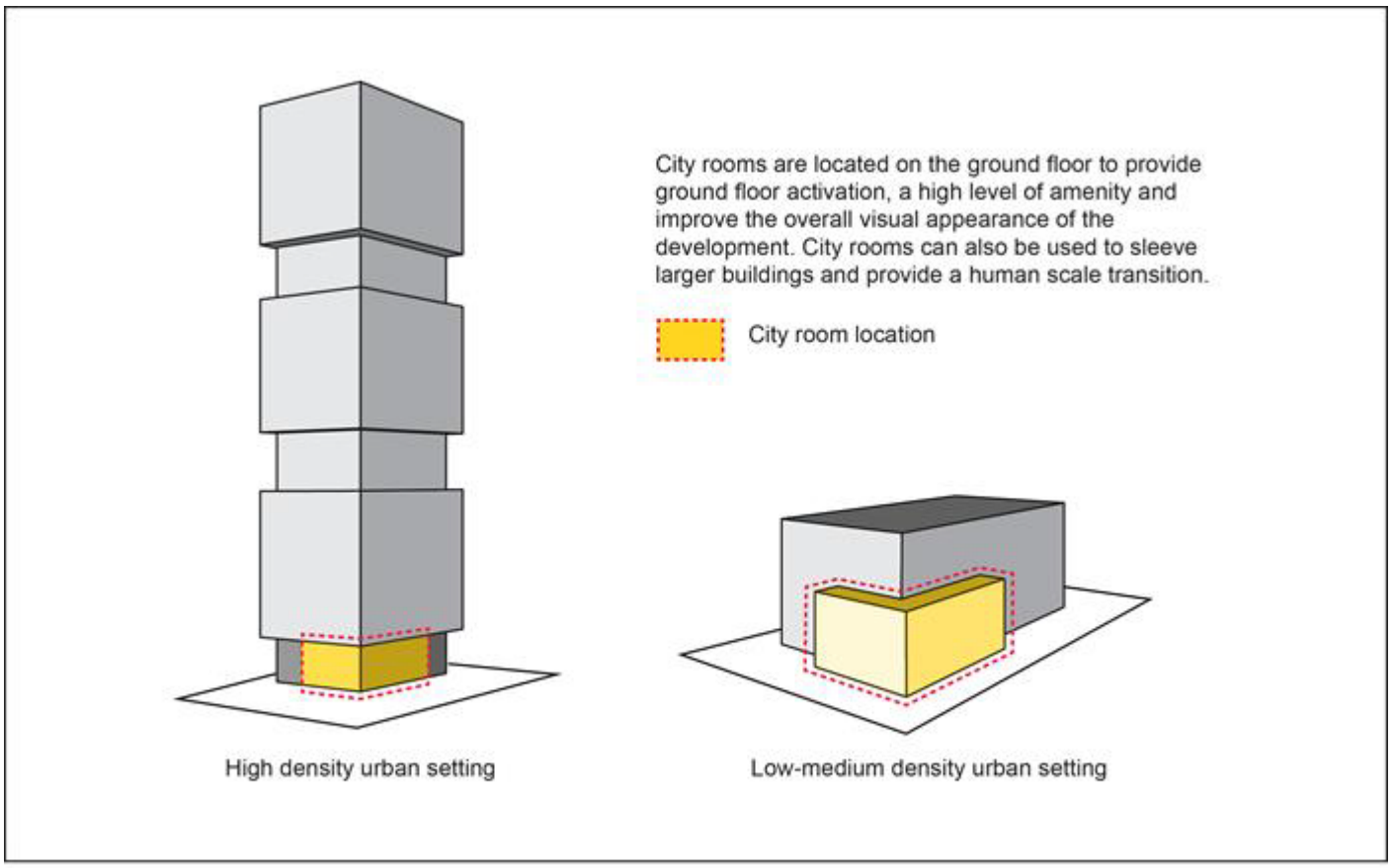

Figure i—Location of city rooms

View the high resolution of Figure i—Location of City rooms

4. City rooms are an appropriate design response to provide breaks in the built form, human scale transitions and ground floor activation. These spaces can vary in scale, size and shape, however, at a minimum incorporate:
    a. transitions or recesses in the built form of the ground plane, merging the public realm with the interior of the building to encourage street activation;
    b. double height ceilings with recessed and partially shaded spaces incorporating design elements such as shading forms, devices or structures to maximise the use of the semi-outdoor space, respond to a subtropical climate and improve amenity to encourage occupancy all year round;
    c. open or operable building facades and building edges that incorporate design elements such as glazing, operable windows, doors, operable walls and openings to reduce visual and physical barriers between the private and public realm, provide natural daylight and ventilation, increase street activation and provide opportunities for casual surveillance. Refer to section 4.5 and section 4.6 for further guidance;
    d. a balanced mix of soft and hard landscaping, including the use of living greenery elements to improve the useability, liveability and amenity of both the building and surrounding public realm. Refer to section 6 for further information;
    e. detailed, fine grained elements, features and materials that are visually interesting, sustainable and promote a human scale transition;
    f. design strategies to ensure the safety and security of property, occupants and the community;

g. fine grained non-residential uses or activities that encourage intensive pedestrian activation where this is an outcome sought by relevant assessment benchmarks.

Figure j provides an example of how these elements can be incorporated into the design of a city room.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy

Reason for change: Post consultation changes to Figure j. In response to submissions.

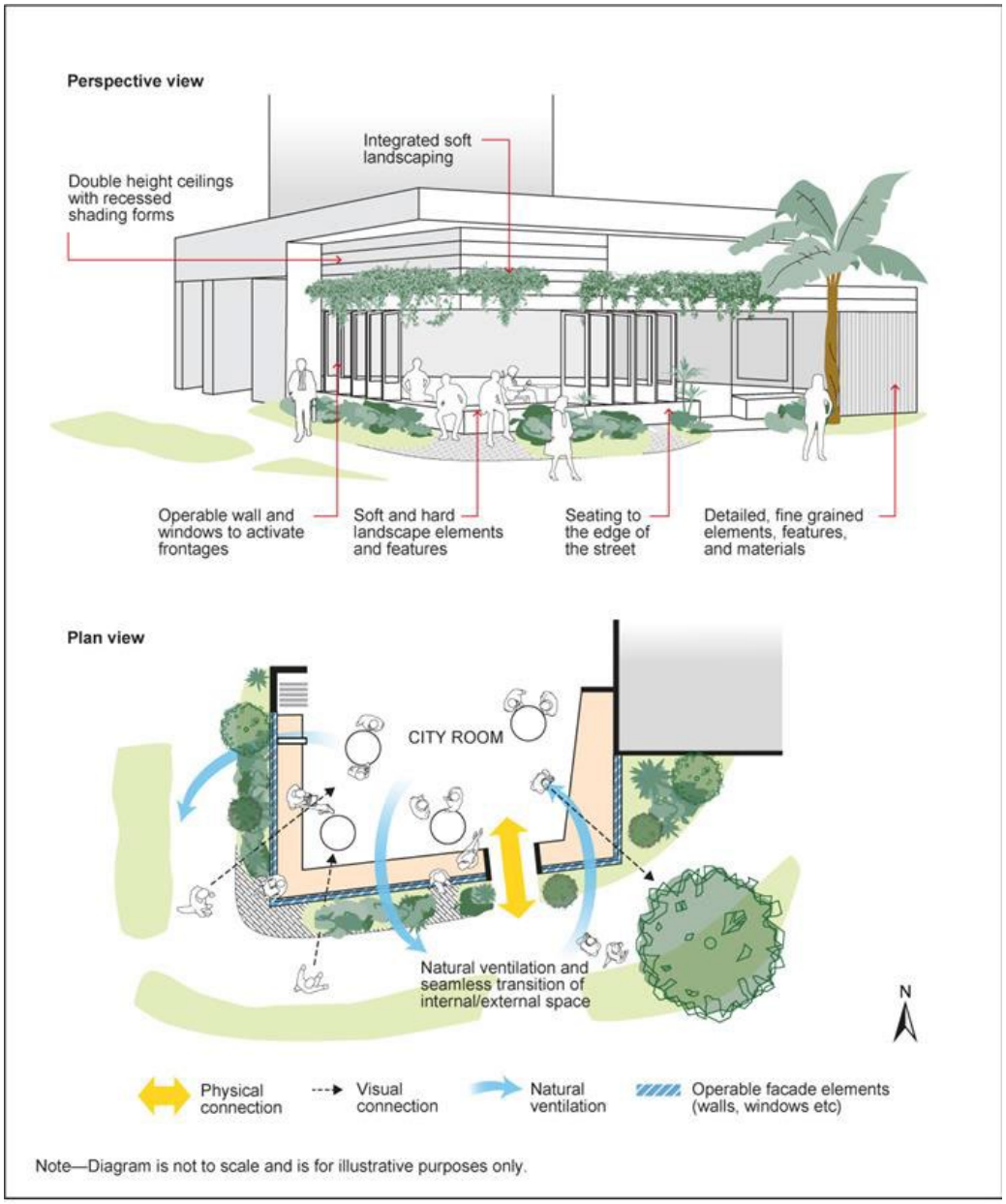

Figure j—City room – design principles

View the high resolution of Figure j—City room - design principles

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

5. A city room does not include extensive glazing elements without operable components, to create a fully enclosed wintergarden. This design approach is not an appropriate response to subtropical design and is not supported.

3.2 Sky terrace

1. A sky terrace is an architectural design element located on the rooftop of a podium or tower or integrated into tower design. Sky terraces provide a visual connection between the private and public realm and are flexible spaces that can accommodate non-residential uses or include sufficient area to allow for a variety of communal passive and active recreation activity spaces for the building's occupants. These features provide a high level of amenity, improve the overall visual appearance of the development and contribute to Brisbane's sustainability and subtropical lifestyle.

Note—For the purposes of this planning scheme policy, a sky terrace is not a rooftop garden as defined in SC1.2.3 Brisbane City Council administrative definitions. An amenity space located on top of the highest storey of the development that does not meet the definition of a rooftop garden may be considered a sky terrace where it achieves the outcomes of this planning scheme policy.

2. Sky terraces can be used as a subtropical design response for new development in medium and high density urban settings. This may include development in the Medium and High density residential zones, and in the centre zone, mixed use zone or specialised centre zone categories. Sky terraces are not anticipated as a subtropical design response outside of these locations.

3. Sky terraces are an appropriate design response for achieving the required horizontal or vertical breaks in the built form or can be used to provide outdoor space and activation on the rooftops of podiums or towers. Refer to Figure k for guidance.

Reason for change: Post consultation change to Figure k. In response to submissions.

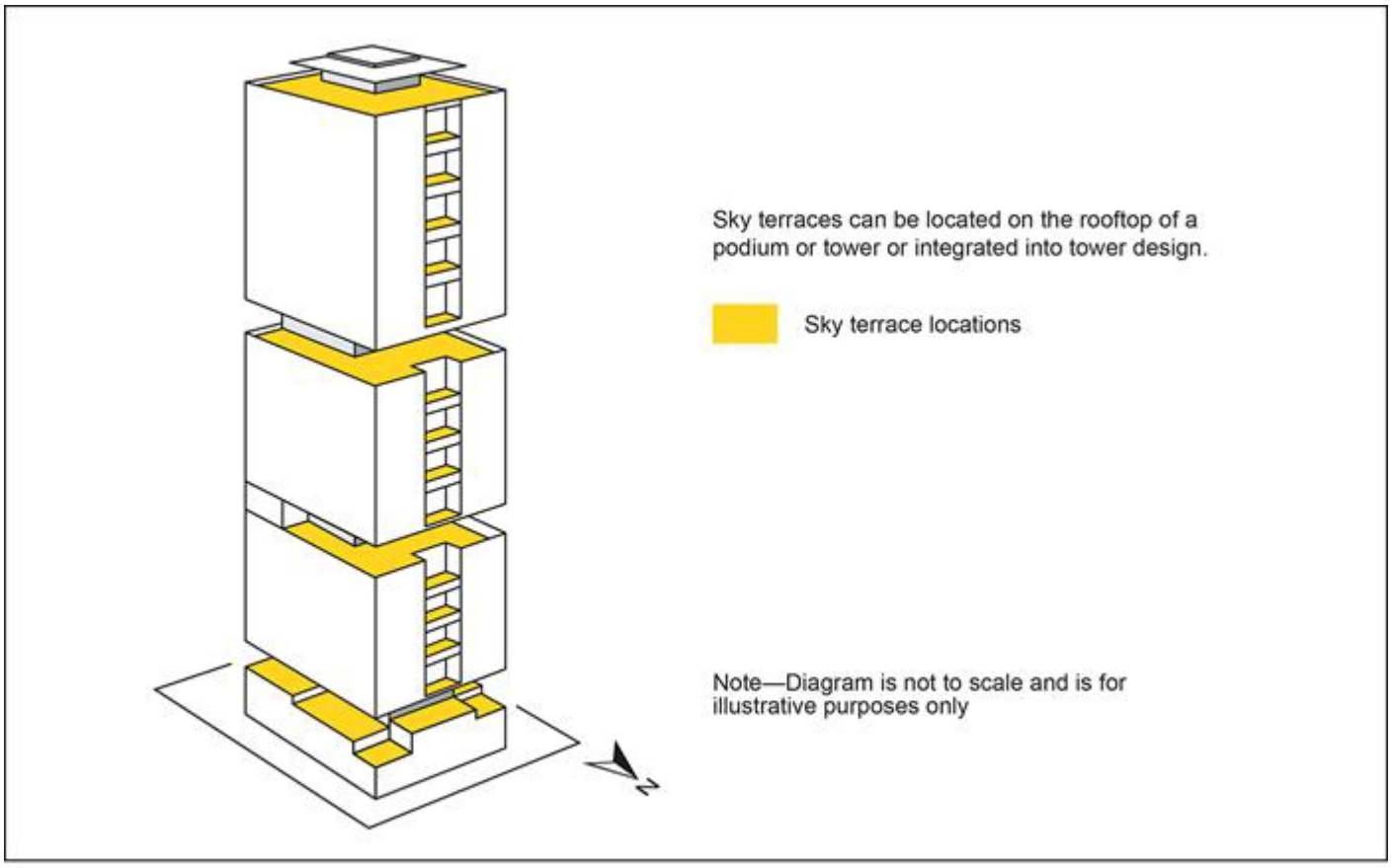

Figure k—Location of Sky terraces

View the high resolution of Figure k—Location of Sky terraces

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

4. Sky terraces can be strategically located to address overshadowing and wind effects from adjoining sites, allowing sunlight and wind to pass through the spaces and mitigate unwanted impacts.

5. Sky terraces can provide a high amenity space to accommodate non-residential uses where aligned to the outcomes sought for the relevant assessment benchmarks.

6. Sky terraces can provide passive and active recreation opportunities for the building's occupants and have a different function to balconies and other private open spaces that achieve the private open space requirements of the relevant assessment benchmarks.

7. Sky terraces can vary in scale, size and shape, however, at a minimum they should:
    a. be integrated into the built form and exhibit subtropical architectural excellence, defining the site and its setting through expression, silhouette, rhythm, scale and composition when viewed from public vantage points;
    b. be designed, sized and located to respond to the operational and functional needs of the residential or non-residential use and anticipated occupant activity in the building;
    c. avoid offsite privacy and amenity impacts while taking advantage of immediate and distant views and providing opportunities for casual surveillance to the public realm. Refer to section 2.1 for further information;
    d. include a balanced mix of soft and hard landscaping, including the use of living greenery elements to improve the useability, liveability and amenity of the building. Refer to section 6 for further information;
    e. ensure that any plant and equipment are visually and acoustically screened from the occupiable space. Where a sky terrace is located on a rooftop, the current and future inclusion of plant and equipment should be designed to feature as an architectural feature and not detract from the use of the sky terrace or the appearance of the rooftop when viewed from public vantage points;
    f. where located on the rooftop of a podium or tower, include design elements such as shade structures to maximise the use of the outdoor space, respond to a subtropical climate and improve amenity to encourage occupancy all year round;
    g. where integrated into the tower design to provide a horizontal or vertical break to reduce the bulk, scale and form of the building, sky terraces should have a minimum double height ceiling.

Refer to Figure I for guidance

Note—The following planning scheme policies should be referred to for further guidance and information:

- Landscape design planning scheme policy
- Planting species planning scheme policy

Reason for change: Post consultation change to Figure I. In response to submissions.

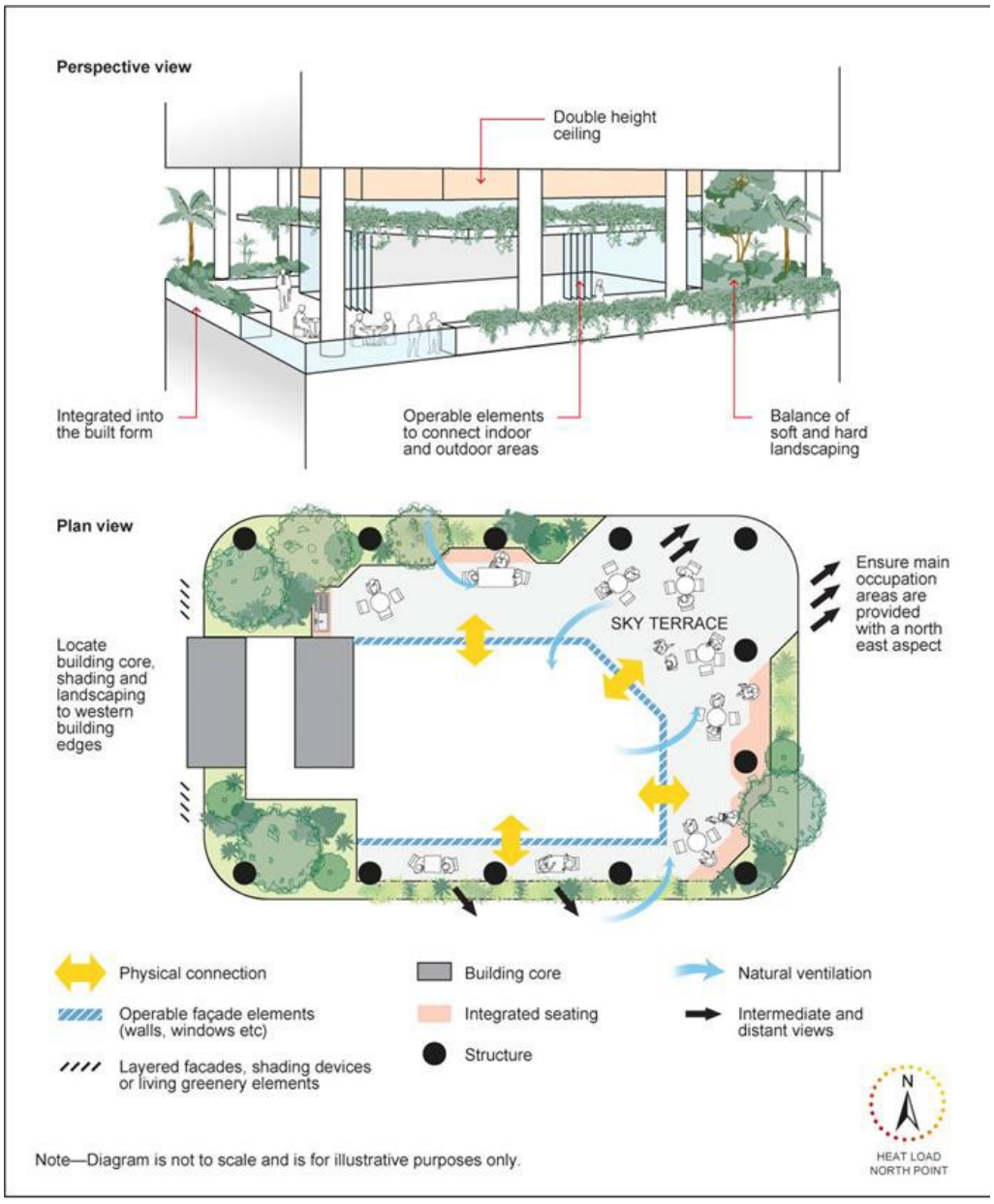

Figure I—Sky terrace – design principles

View the high resolution of Figure I—Sky terrace - design principles

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

8. Sky terraces can be designed to feature both indoor and outdoor areas, to improve the function and operation of the space and encourage occupancy and use all year round. Where sky terraces include an indoor area, the use of operable elements is required to provide for natural daylight and ventilation and a connection between indoor and outdoor areas. Any indoor area is not designed to be fully enclosed with extensive glazing elements that do not have an operable component to create an

indoor wintergarden. This approach is not an appropriate response to subtropical building design and is not supported.

3.3 Private open space and balconies

1. Private open space and balconies are critical design elements of residential and non-residential land uses. All forms of private open space provide an opportunity for internal habitable spaces to extend and create a seamless connection between indoor and outdoor areas, providing natural daylight and ventilation and opportunities for passive and active recreation to service the needs of the individual occupant. Situated above the ground plane, balconies can also be used as a subtropical design response to provide shading to building facades and provide an articulated depth to reduce bulk, scale and form, improving local character and identity. Collectively, private open space and balconies contribute to Brisbane's sustainability and subtropical lifestyle.

2. Private open space and balconies are designed with sufficient dimensions and have a total area to meet the operational and functional needs of the residential or non-residential land use. Refer to Figure m for guidance.

Note—Private open space and balconies for residential uses are an extension of internal habitable space, functioning as an outdoor room and providing capacity for sitting and standing whilst supporting the operation and function of the land use. For residential development, this may include but not necessarily be limited to, space for outdoor living such as accommodating furniture, food preparation, recreation space and discrete clothes drying. For non-residential development, these spaces should support the function of the land uses, such as providing breakout spaces for employees. Multiple areas of private open space or balconies could be provided to facilitate these outcomes for an individual building occupant.

Note—The relevant assessment benchmarks provide the minimum dimensions for balconies and other areas of private open space for new development.

Reason for change: Post consultation change to Figure m. In response to submissions.

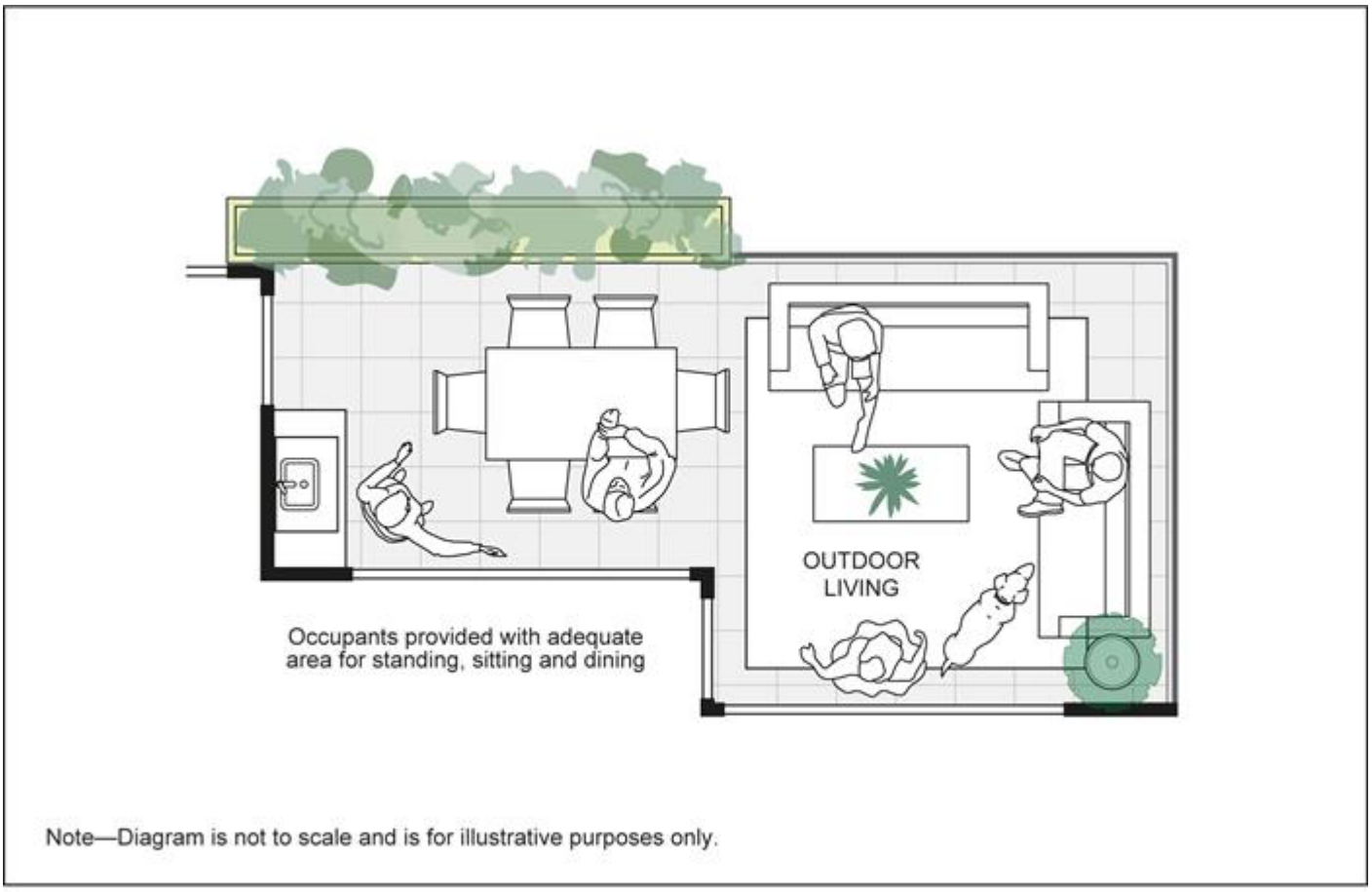

Figure m—Private open space with adequate area for the building occupants

View the high resolution of Figure m-Private open space with adequate area for the building occupants

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

3. The design of a private open space or balcony will vary in size and shape and will be highly dependent on the proposed land use and the requirements of the relevant assessment benchmark. The following subtropical design principles can be used to guide the design of private open space and balconies:
    a. optimal location and orientation of outdoor areas is sought to:
        i. provide ideal access to natural daylight and ventilation to support outdoor living and improve occupant amenity;
        ii. minimise the instances where external shading or screening devices are used as the primary means to provide privacy or mitigate other amenity impacts;
        iii. result in a seamless flow between the primary habitable areas and outdoor spaces:
            A. for residential development, private open space and balconies should be located to adjoin the primary living area of the dwelling to maximise opportunities for natural ventilation and subtropical living. Refer to Figure n for guidance;

Reason for change: Post consultation change to Figure n. In response to submissions and new planning information to rotate image to north.

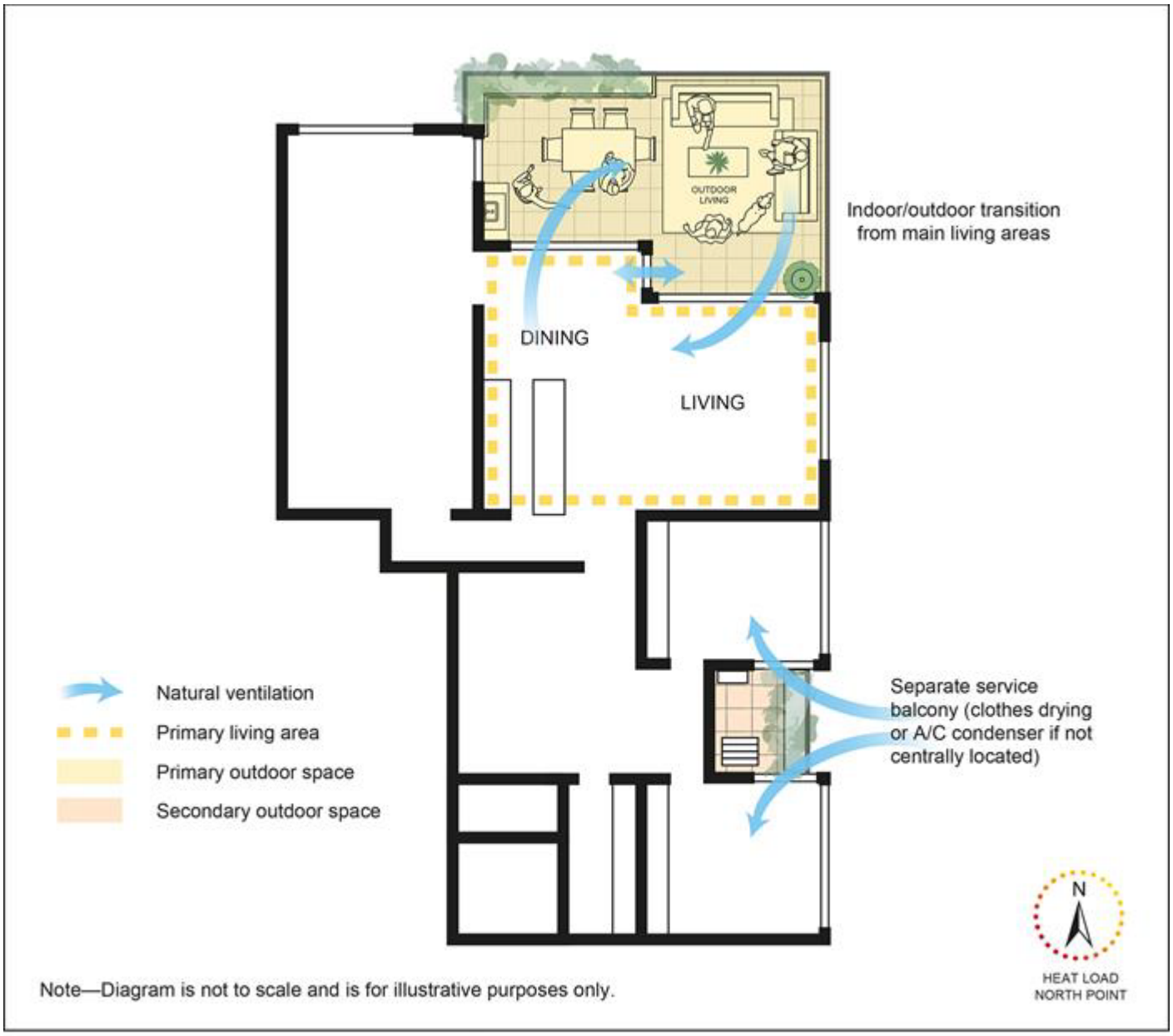

Figure n—Private open space located off the primary living area to maximise opportunities for subtropical living

View the high resolution of Figure n—Private open space located off the primary living area to maximise opportunities for subtropical living

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

B. for non-residential development, balconies should be directly accessible from main communal spaces to provide recreation and amenity for employees or patrons;

b. where located on a street frontage, contribute to the local character and identity and provide opportunities for passive surveillance and interaction between the private and public realm. Refer to Figure o and Figure p for guidance;

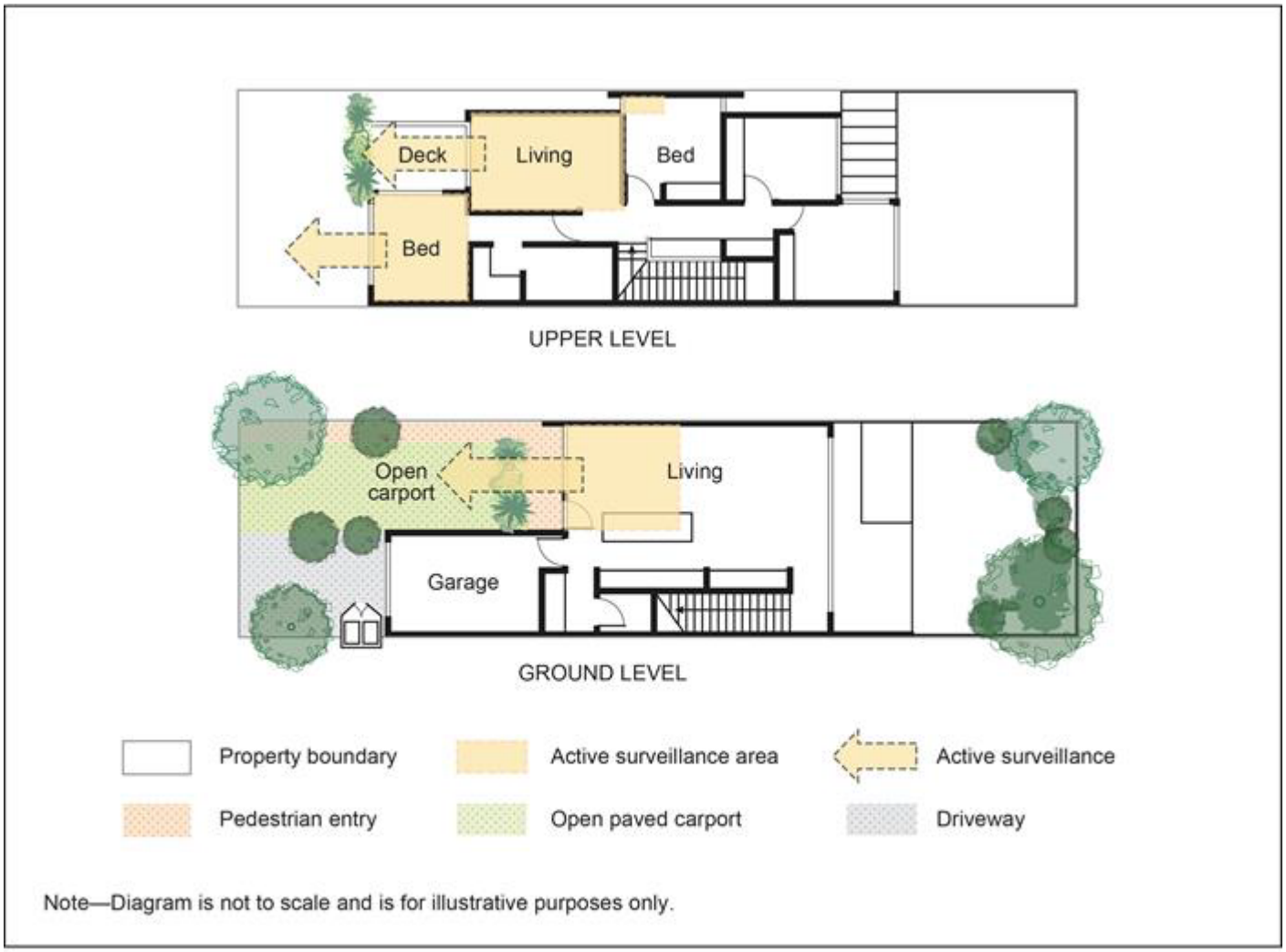

Figure o—Private open space and balcony located on a street frontage (plan view)

View the high resolution of Figure o—Private open space and balcony located on a street frontage (plan view)

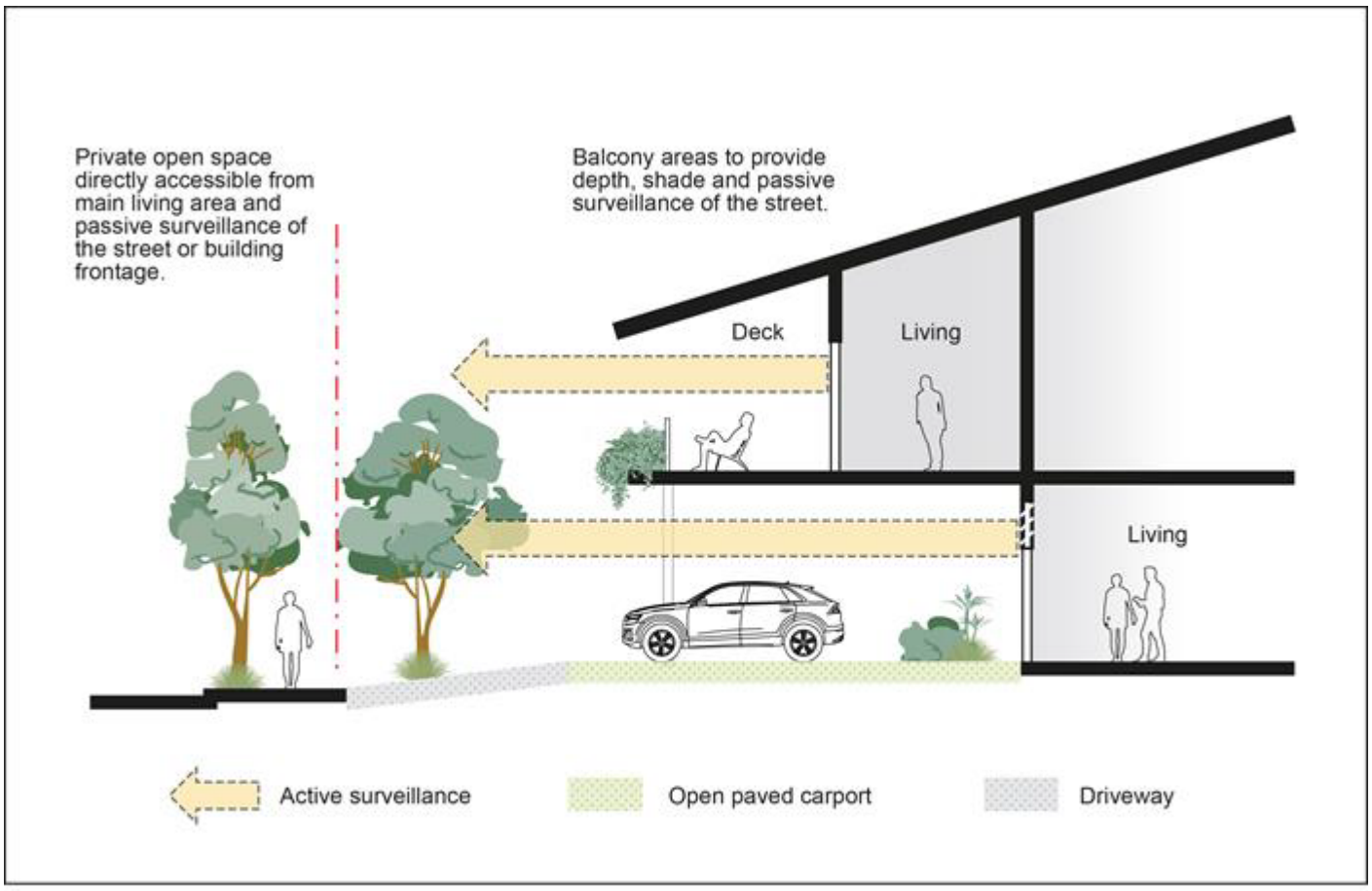

Figure p—Private open space and balcony located on a street frontage (section view)

View the high resolution of Figure p—Private open space and balcony located on a street frontage (section view)

c. should consider the current or future provision of building services, utilities or infrastructure to service the building's occupants to minimise instances where these impact on the function of the private open space or balcony. Accommodating building services, utilities or infrastructure on balconies is not considered best practice in subtropical design;

Note—The location of building services, utilities or infrastructure should be considered early in the design process and integrated into the overall built form where possible.

d. landscaping and artificial growing environments can be integrated into the design of private open space and balconies to support occupant amenity and improve the visual appearance of the development. Refer to section 6 for further information.

Note—Integration of landscaping into private open space and balconies should carefully consider plant selection and ongoing maintenance requirements.

6. The enclosing of balconies with glazing elements is not an appropriate response to subtropical design and is not supported. Where required to improve the functionality and desired amenity for building occupants, balconies can incorporate operable screening or shading elements that continue to allow for an appropriate level of engagement with the public realm. Refer to section 5 for further information.

Note—The requirements for screening devices are identified in the assessment benchmarks of the relevant code.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy

3.4 Atrium

1. An atrium is an architectural design element, partially or completely wrapped by a building's floorplate that provides an open air, or skylight covered void across more than two levels. Atriums are flexible spaces that facilitate the movement of the building's occupants, deliver a high standard of amenity and improve the overall aesthetic appearance of the development. These features can also facilitate natural daylight and ventilation while providing a visual connection across multiple building levels in the internal environment, contributing to Brisbane's sustainability and subtropical lifestyle.

2. Atriums can be centrally located to provide natural daylight opportunities for development with large expansive floorplates or where new development is impacted by overshadowing from adjoining sites. Atriums can also be located on the edge of a building's floorplate to reduce the bulk, scale and form by providing modulation and variation to the building's horizontal or vertical profile. Figure q and Figure r provide further guidance for the design of centrally located and building edge atriums.

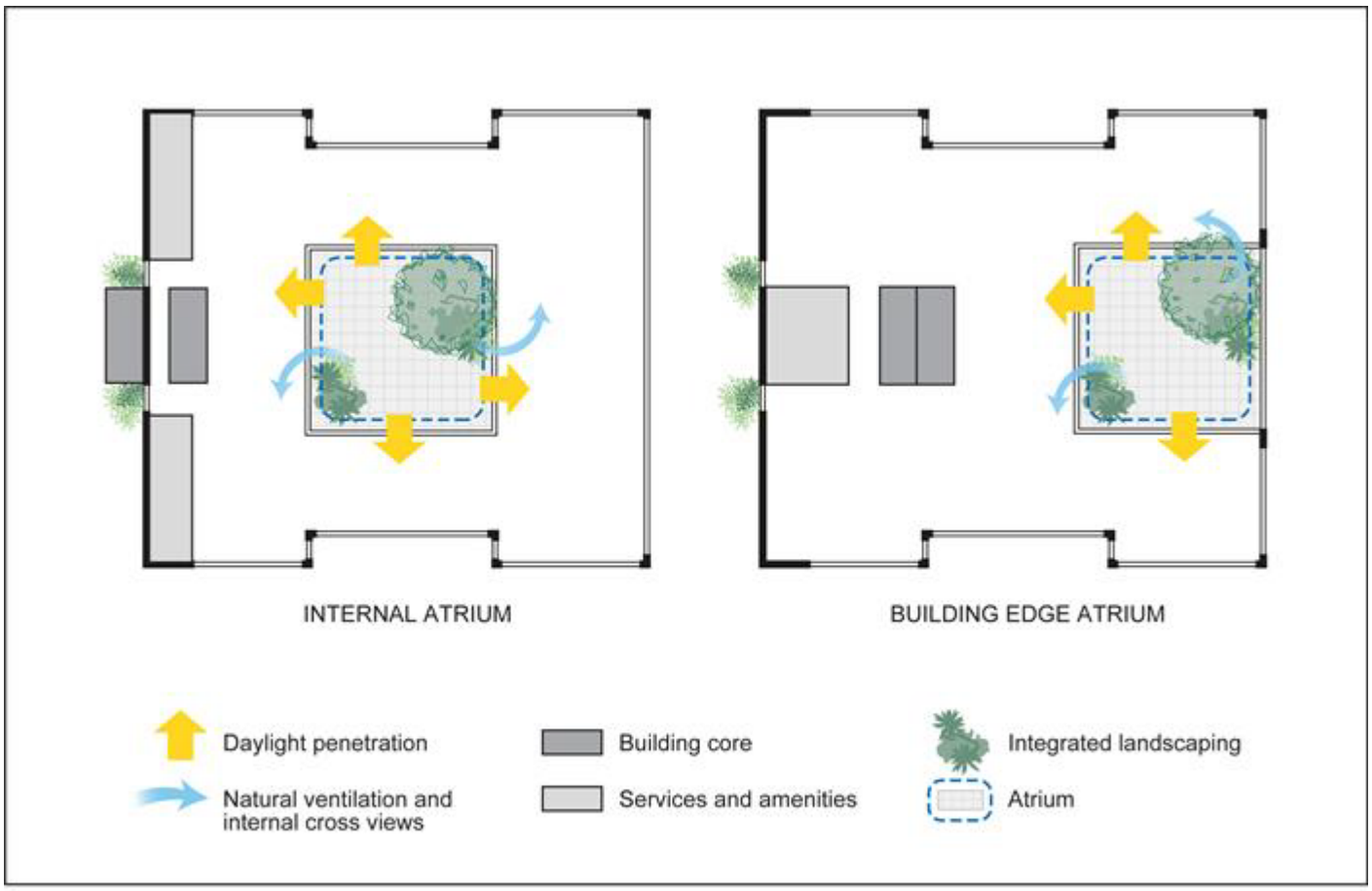

Figure q—Internal atrium and Building edge atrium – Internal atrium and Building edge atrium (plan view)

View the high resolution of Figure q—Internal atrium and Building edge atrium - plan view

Reason for change: Post consultation change to Figure r. New planning information to highlight recessed podium and context.

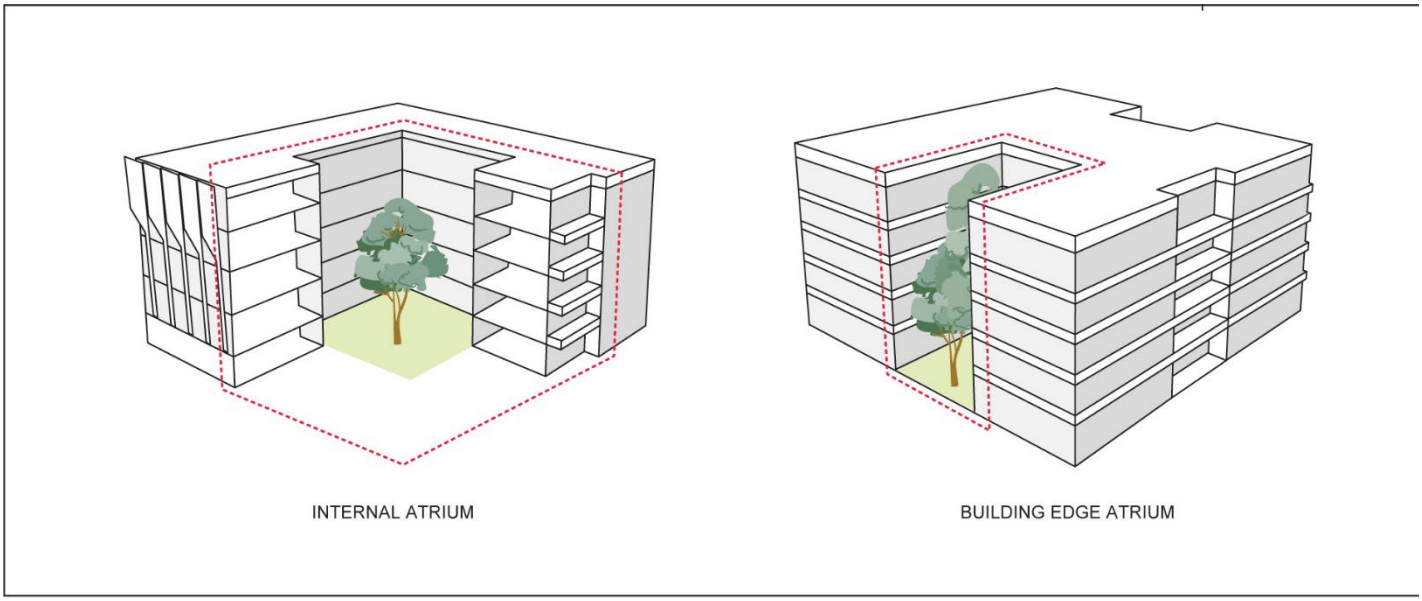

Figure r—Internal atrium and building edge atrium – perspective view

View the high resolution of Figure r—Internal atrium and Building edge atrium - perspective view

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

3. Atriums can vary in scale, size and shape and at a minimum should:
    a. be designed, sized and located to respond to the scale of the proposed use and the expected occupant activity in the building;
    b. contribute to the subtropical architectural distinction, visual interest and enhance the presentation of the building;
    c. provide access to natural daylight and ventilation to reduce the reliance on artificial lighting and support the amenity and comfort of the building's occupants;
    d. include a balanced mix of soft and hard landscaping, including the use of living greenery elements to improve the useability, liveability and amenity of the building. Refer to section 6 for further information;
    e. carefully consider the potential impact to the function and operation of the building and amenity of occupants (such as increased acoustic levels) and include design strategies to mitigate unwanted impacts;
    f. utilise the lowest level of the atrium void to provide an indoor or semi-outdoor space to facilitate and provide a range of passive and active recreation opportunities.

Note—Atriums are not required to cross all levels in a building to the ground floor. Any space that provides a void across more than two levels can be considered an atrium and should incorporate subtropical design principles.

Note—Where located on the edge of a building, an atrium may be fully or partly enclosed. Where the atrium is enclosed, the use of operable elements is encouraged to maintain opportunities for natural daylight and ventilation.

Note—Design strategies such as soft landscaping in artificial growing environments can assist in mitigating unwanted amenity impacts (such as acoustics) while contributing to the amenity and aesthetics of internal spaces and are encouraged.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Landscape design planning scheme policy
- Planting species planning scheme policy

4. Where an atrium includes a fully or partially open roof, shading forms, devices or structures are used to support the function and operation of the space to encourage occupancy and use year round. Refer to section 5 for further guidance.

Note—The outcomes outlined above are for the purposes of amenity and aesthetics in the design and delivery of atriums for subtropical building design. Atrium design must not result in non-compliance with the building assessment provisions identified in the *Building Act 1975* or other relevant legislation.

3.5 Recessed podium

1. A recessed podium is an architectural design element that delivers a subtropical podium design to provide a connection between the private and public realm. Recessed podiums create a perceived visual widening of the street by incorporating volumetric recesses with limited barriers on the ground plane to encourage the extension of the street verge below the upper levels of the building. These spaces and volumes respond to the character of the area, are respectful and align to the scale, podium heights, setbacks and streetscape of adjoining buildings. Recessed podiums accommodate subtropical landscaping, provide a high level of amenity, improve the overall visual appearance of the development and contribute to Brisbane's sustainability and subtropical lifestyle.

2. Recessed podiums can be used as a subtropical design response for new development in high density urban settings. This may include development in the Principal centre zone, Major centre zone or mixed use zone category. Recessed podiums are not anticipated as a subtropical design response outside of these locations.

3. Recessed podiums can be strategically located to provide breaks in built form, significant facade articulation and modulation of the podium, and address wind effects on the ground plane. Recessed podiums provide shaded areas of respite within the private lot available for public access. These elements can also be incorporated to provide an active building edge to contribute to the character and activation of the adjoining public realm.

4. Recessed podiums can vary in scale, size and shape, however, at a minimum they should:
    a. respond to the strategic location and context of the site;
    b. be an appropriate scale to the overall building height, surrounding built form and streetscape;
    c. incorporate recesses in the built form and a minimum double height ceiling to reduce development intensity at the edge of the podium and to allow natural daylight and ventilation to move through the space. Refer to section 4 for further information;
    d. have limited barriers on the ground plane at the edge of site to create a seamless connection between the private and public realm;
    e. include a mix of hard and soft landscaping, with generous use of living greenery elements (such as vertical greenery and elevated gardens) to improve the useability, liveability and amenity of the building and the public realm. Refer to section 6 for further information;
    f. incorporate shading forms, structures, awnings or colonnades to support the function and operation of the space to encourage occupancy and use year round. Refer to section 5 for further information;
    g. integrate detailed, fine-grained elements, features and materials that are visually interesting, sustainable and achieve a human scale design with continuity between the private and public realm;
    h. consider the safety and security of the public and private realm through appropriate design.

Refer to Figure s for guidance.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy

Reason for change: Post consultation change to Figure s. New planning information to highlight recessed podium and context.

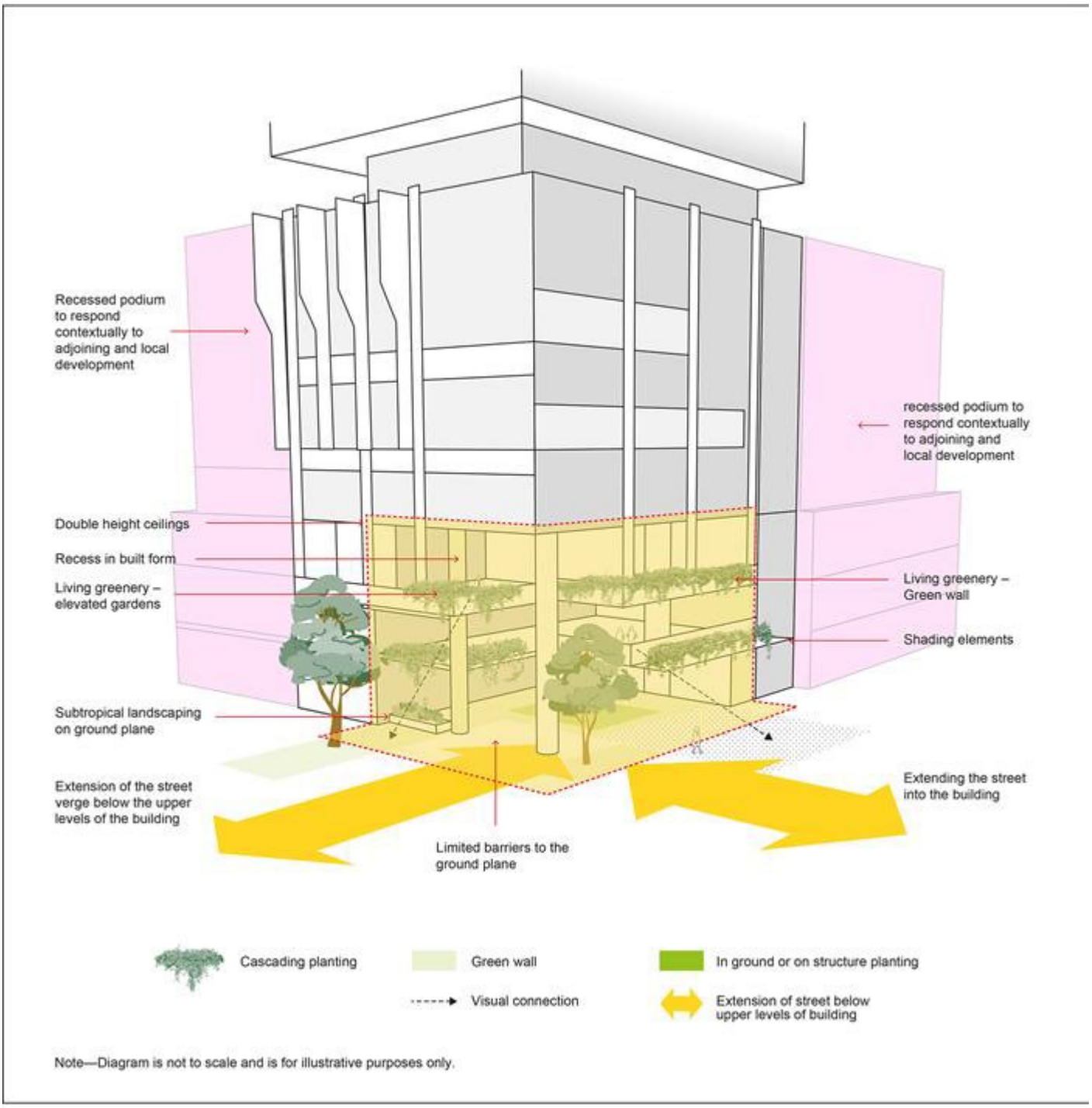

Figure s—Recessed podium – design principles

View the high resolution of Figure s—Recessed podium - design principles

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

3.6 Movement and site connectivity

1. Consideration and planning for the movement of pedestrians and vehicles in development is a critical component of Brisbane's subtropical character and sustainable lifestyle. It is imperative that development consider the logical and safe traversing of the city, suburb and site by improving permeability, connectivity and encouraging street activation.

2. Movement networks must be easily accessible, attractive, shaded, equitable and support personal safety by responding to the needs of anticipated users and level of activity for the network. The design approach for these elements will differ depending on anticipated users, however, the following design principles can be applied irrespective of individual design needs:
    a. new connections should, wherever possible, link to existing connections or destinations, including public transport, pedestrian routes, cycling routes, public realm, open space or natural landscape features;
    b. entry and exit points for new connections should be easily identifiable and provide a logical and legible movement path that responds to the needs of the user;
    c. grade changes along the connection and to the adjoining public realm should be limited or incorporate design solutions to improve legibility and connectivity that do not disadvantage the user;
    d. movement solutions should encourage use of the connections and link to the broader network;
    e. where the connection caters to pedestrians and active transport users, connections should provide shade and integrate with the adjoining built form to encourage engagement and street activation between the private and public realm;
    f. provide an attractive and high quality urban environment appropriate for the function of the connection, including appropriate kerb and verge treatments and the integration of landscaping, furniture, lighting and public art;
    g. ensure personal safety by incorporating crime prevention through environmental design principles, providing activation through land uses and activity, natural or artificial lighting or opportunities for casual surveillance.

Note—Movement and site connectivity should be informed through an urban context analysis that considers the integration, proximity and linkages to existing connections such as laneways or arcades, high frequency public transport nodes, routes identified on the Bicycle network overlay and public open space. Refer to section 2.1 for further information.

Note—Shading for connections that cater for pedestrians and active transport users can be provided through shade structures, awnings and colonnades or living greenery elements such as street trees. Refer to section 5 and section 6 for further information.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Infrastructure design planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy
- Structure planning planning scheme policy

3. The design requirements for movement and site connectivity will be different depending on the location of the development. In high density urban settings, movement and site connectivity may be achieved through laneways or arcades.

4. The design of laneways or arcades should encourage street activation and increase active transport permeability. Refer to section 2.3 for further information.

5. Laneways are identified in the Road hierarchy overlay and are required in locations where specified in the Streetscape hierarchy overlay or a specific location identified in a relevant neighbourhood plan. Arcades are only required where identified in a relevant neighbourhood plan or other relevant assessment benchmark. Proposals for laneways or arcades that are not identified in City Plan will require consultation with Council and should be supported by the findings of an urban context analysis. Refer to section 2.1 for further information.

3.6.1 Design of laneways

1. Laneways are a type of local road identified to cater for pedestrians, active transport users and vehicles. Further guidance and information for the design of laneways can be found in the Infrastructure design planning scheme policy.

3.6.2 Design of arcades

1. Arcades are designed to be open, or partially or fully covered pedestrian connections that improve accessibility and provide a direct, convenient, comfortable and safe access through a development site. The scale, width, design and tenure of arcades will reflect its function and location. At a minimum, the design of arcades should:
    a. integrate with adjoining buildings by encouraging casual surveillance and engagement between the private and public realm;
    b. provide an active use edge through appropriate land uses and activities to encourage street activation and engagement between the private and public realm. Refer to section 2.3 for further information;
    c. be provided at-grade with an adjoining public area and connect safely without any lip or step to improve accessibility;
    d. provide a high-quality public realm and experience through finishes and materials, including:
        i. kerb and verge treatments;
        ii. furniture and lighting;
        iii. living greenery elements. Refer to section 6 for further information;
        iv. public art and creative lighting. Refer to section 7 for further information.

Note—Neighbourhood plans may provide specific design and functional requirements for arcades, including tenure and hours of operation. Where this occurs, arcades are to be provided in accordance with the neighbourhood plan.

2. Where an arcade includes an open or partially covered roof, shading forms, devices or shade structures are used to support the function and operation of the space to encourage occupancy and use all year round. Refer to section 5 for further information.

3. Figure t provides further guidance on suitable subtropical design outcomes for arcades.

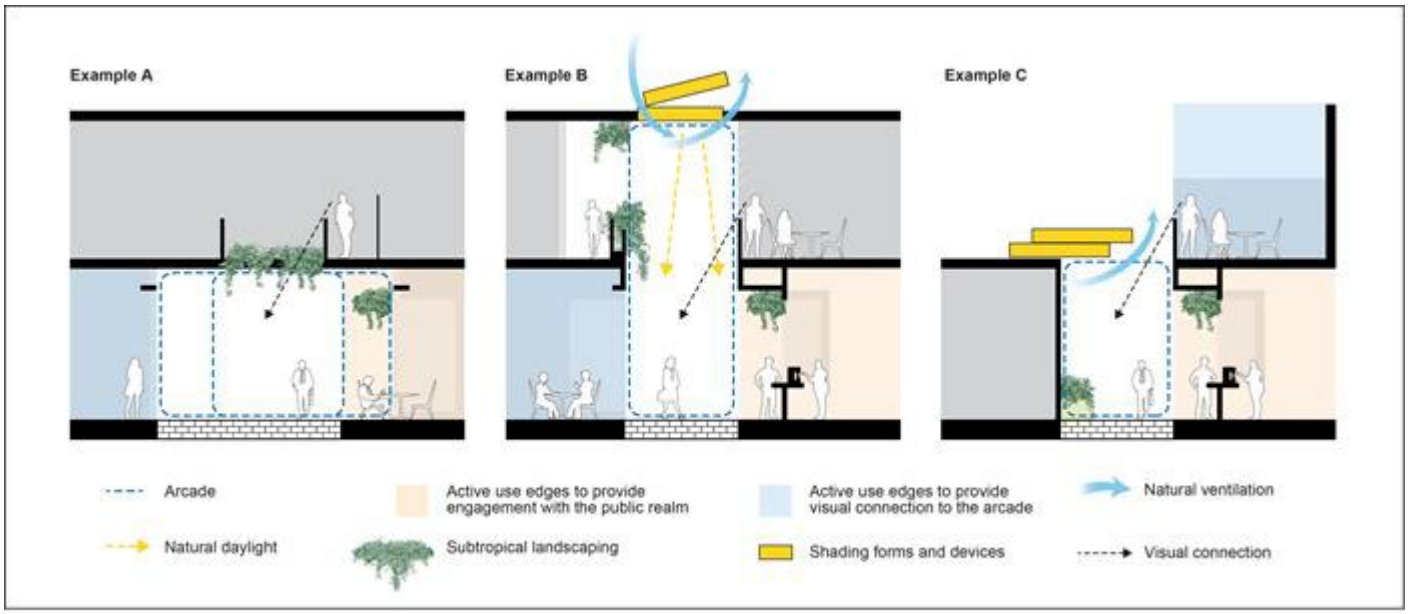

Figure t—Arcade – design principles

View the high resolution of Figure t—Arcade - design principles

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Infrastructure design planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy

4 Natural daylight and ventilation

Reason for change: Post consultation change. In response to submissions.

1. Providing access to natural daylight and ventilation will facilitate climate responsive design and improve passive building performance by minimising the need for artificial means of illumination and climate control. Providing natural daylight and ventilation will improve occupant amenity and support Brisbane's subtropical character and sustainable lifestyle.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

2. Access to natural daylight is an approach to subtropical design that carefully considers the bulk, scale and form of a building and key design elements to minimise the need for artificial lighting to illuminate internal spaces. The quality of natural daylight access in a development is dependent on a combination of factors, including: location and orientation, internal layout and massing, modulation and articulation of the roof and wall planes, setbacks and separation distances and the use of glazing, operable windows, lightwells and skylights, doors, operable walls and openings in buildings.

3. Providing natural ventilation is an approach to subtropical design that incorporates the use of wind and thermal buoyancy to create air movement through indoor and outdoor areas without the use of mechanical measures. The quality of natural ventilation through a development is dependent on a combination of factors, including: optimal location and orientation to take advantage of the dominant wind speed and direction, consideration of the surrounding built form, internal layout and massing, modulation and articulation of the roof and wall planes, setbacks and separation distances, and the use of operable windows, doors, walls and openings in buildings.

4.1 Setbacks and separation distances

1. Setbacks and separation distances between buildings, outdoor spaces and the public realm allow light and air to flow through an urban environment, leading to functional and pleasant indoor and outdoor spaces and contributing to Brisbane's sustainable lifestyle. Setbacks and separation distances also provide an opportunity for soft landscaping located on the ground plane or in artificial growing environments to flourish in urban settings, positively contributing to amenity and subtropical character of the private and public realm.

2. Building setbacks and separation distances must respond to the context, location, land use and scale of development. The setbacks and separation distances identified in the relevant assessment benchmarks are appropriate for facilitating subtropical design outcomes and should be incorporated into the development design. Any alternative setbacks or separation distances proposed by new development should be informed by the findings of an urban context analysis to ensure that subtropical design outcomes of the subject site and adjoining sites can continue to be achieved. Refer to section 2.1 for further information.

3. Separation distances between buildings and other structures can be increased through the modulation and articulation of the roof and wall planes to reduce the bulk and scale of development and improve the opportunity for climate responsive building design. Providing modulation and

articulation of the roof and wall plane will also contribute to the visual interest and character of the area. Refer to Figure u for guidance.

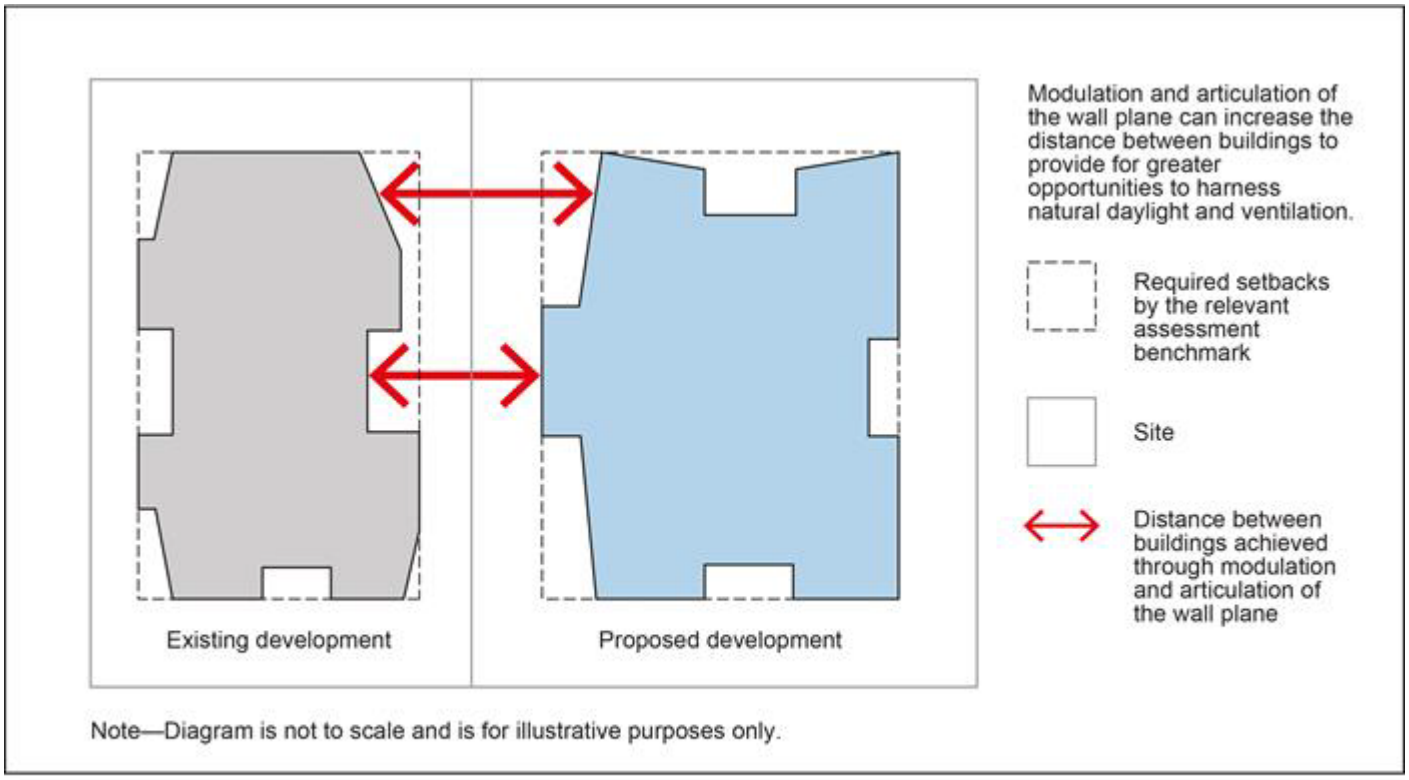

Figure u—Modulation and articulation of the wall plane to increase separation distances

View the high resolution of Figure u—Modulation and articulation of the wall plane to increase separation distances

4.2 Glazing

1. Glazing can support climate responsive design by optimising daylight to the perimeter of internal spaces and minimising the need for artificial lighting. Although glazing can provide benefits for subtropical design, its use requires careful consideration to ensure that it does not increase the need for artificial climate control measures (such as air conditioning) or result in undue nuisance, discomfort or hazards within or adjoining the development site. To optimise subtropical design outcomes, the use of glazing should be considered through the following approaches:
    a. glazing should generally be located on northern and eastern facades to allow for natural daylight, and minimised on the western facades where solar exposure is greatest;
    b. glazing should maximise the use of shading elements to avoid unwanted amenity impacts. Refer to section 5 for further information;
    c. the use of glazing that includes operable elements is encouraged to provide opportunities for natural daylight and ventilation to internal spaces. Refer to section 4.5 for further information;
    d. internal habitable spaces should be located to respond to the use of glazing, balancing the desired solar exposure while mitigating privacy and other amenity impacts;
    e. opacity of glazing should be appropriately selected to achieve the desired casual surveillance, privacy or amenity outcomes sought within or adjoining the site. The use of privacy film should

not be used as a primary means of mitigating unwanted overlooking for the building's occupants and should instead be addressed through optimal location and orientation, internal layout or by including design elements to the building facade;

f. the use of glazing should be maximised on the lower levels of a building to allow greater opportunity for natural daylight to habitable areas.

2. Glazing can be used to increase street activation on the lower levels of a building to contribute to vibrant commercial activity, community life and provide a strong visual connection between the private and public realm. Refer to section 2.3 for further information.

3. Glazing should, wherever possible, be provided in tandem with solid design elements to improve occupant amenity and contribute to Brisbane's subtropical character. This can be achieved through combining the use of glazing with design elements such as layered facades, external shading forms or devices, colonnades and awnings. Refer to section 5 for further information.

4. Fully glazed curtain wall facades, without appropriate layering or shading from solid design elements to respond to solar exposure, are not considered to appropriately respond to Brisbane's subtropical character and sustainable lifestyle and are not supported.

4.3 Light wells and skylights

1. Light wells and skylights provide an opportunity for natural daylight to illuminate internal spaces where access to light may be limited. These design elements can also be used to provide opportunities for natural ventilation and support living greenery to contribute to Brisbane’s subtropical character or sustainable lifestyle.

2. Lightwells and skylights can be used for residential and non-residential uses at all scales of development. The use of light wells and skylights to facilitate natural daylight and ventilation opportunities will be significantly impacted by location and orientation, and internal layout and massing. Lightwells and skylights can be used where:
    a. development involves a large floorplate that limits the ability of transparent elements (such as glazing or operable windows) on the building edge to naturally illuminate the central area of internal spaces;
    b. development is impacted by overshadowing from existing development on adjoining sites that may limit access to daylight;
    c. built to boundary walls limit the application of transparent elements (such as glazing or operable windows) to naturally illuminate internal spaces on the edge of the floorplate or where opportunities to maintain desired amenity outcomes such as privacy may be limited;
    d. located directly above stairwells, circulation areas or main living areas to improve building performance by providing opportunities for natural daylight and ventilation;
    e. including an operable component, to facilitate air movement through internal spaces

f. the development includes internal planting or other subtropical landscaping that requires access to natural daylight to achieve the desired amenity and aesthetic outcomes of buildings and outdoor spaces. Refer to section 6 for further guidance.

Refer to Figure v for further guidance.

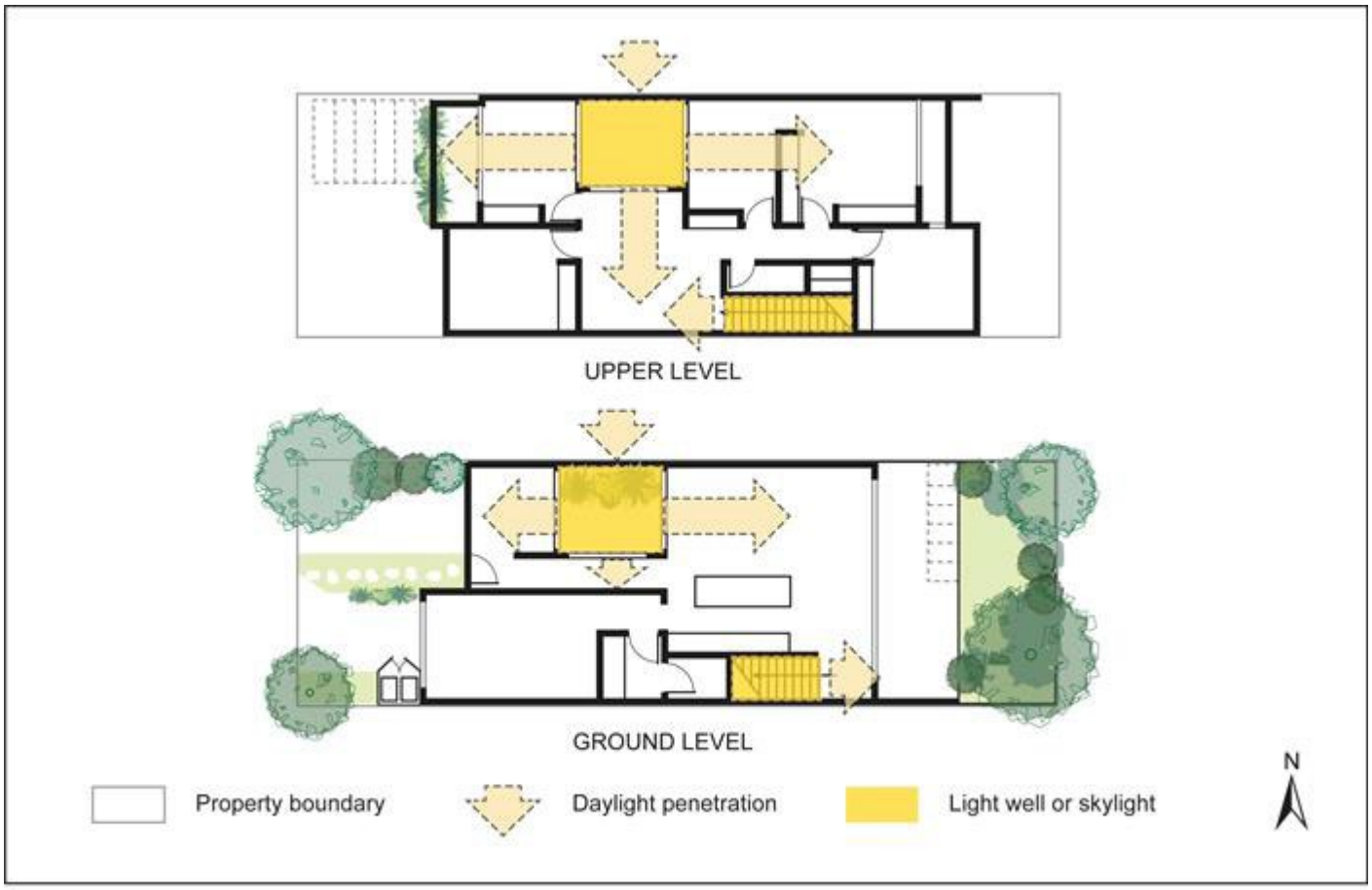

Figure v—Light wells and skylights for natural daylight

View the high resolution of Figure v—Light wells and skylights for natural daylight

3. The use of light wells and skylights must respond to the location and orientation of the proposed land use. Where appropriate, light wells and skylights can be used in combination with other design elements, such as atriums, to support Brisbane's subtropical character and sustainable lifestyle and provide for functional and climate responsive building design. Refer to section 3.4 for further information.

4.4 Optimising natural ventilation

1. Natural ventilation can be optimised through careful consideration of location and orientation, internal layout and massing of buildings. The use of breaks in built form, including modulation and articulation

in the facade's horizontal and vertical profile, provide the greatest opportunities for natural ventilation through large floorplates. In addition, smaller design features such as operable windows, doors, walls and openings can be used to further facilitate successful natural ventilation.

2. The use of smaller scale design elements such as operable windows, doors, walls and opening is encouraged on the lower levels of buildings where the impacts from strong winds are not as significant as those in elevated locations.

3. Operable windows, doors, walls and openings should be located directly opposite to one another to provide a clear, unobstructed passage of airflow through internal spaces. Other design elements such as breezeways and open corridors can further facilitate natural ventilation for residential uses. For non-residential uses elevated balconies or sky terraces can be used to enhance airflow through large internal floorplates. Internal spaces that obstruct a continuous passage of airflow will inhibit air movement and thermal buoyancy and will not deliver an appropriate subtropical design response. Development should carefully consider the location of internal spaces throughout a building to ensure the desired level of amenity is maintained. Refer to Figure w or further guidance on single and double loaded residential floorplate layouts and Figure x for commercial floorplate layouts that optimise natural ventilation.

Reason for change: Post consultation change to Figure w. In response to submissions.

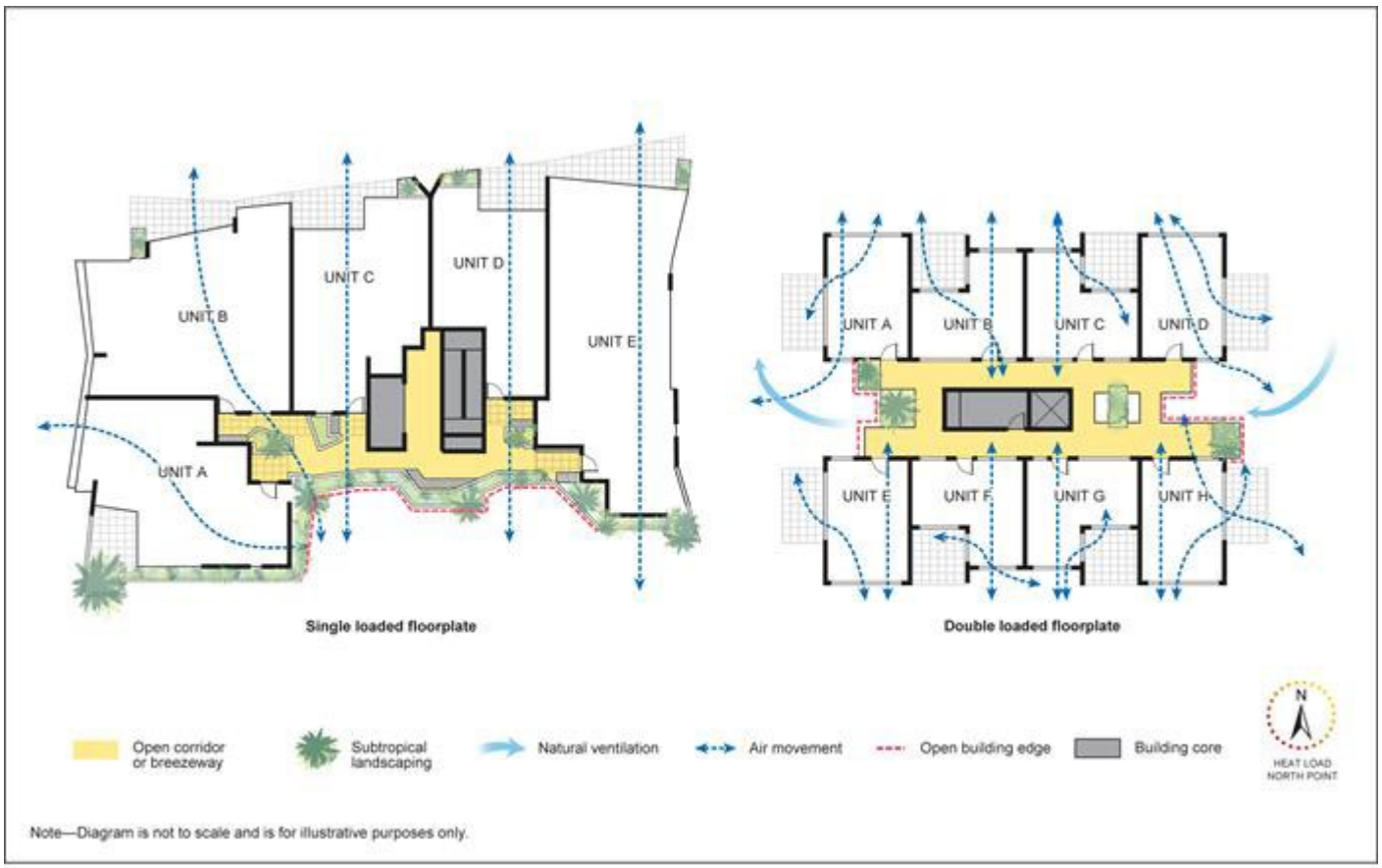

Figure w—Optimising natural ventilation for subtropical design outcomes – residential layout

View the high resolution of Figure w—Optimising natural ventilation for subtropical design outcomes – residential layout

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

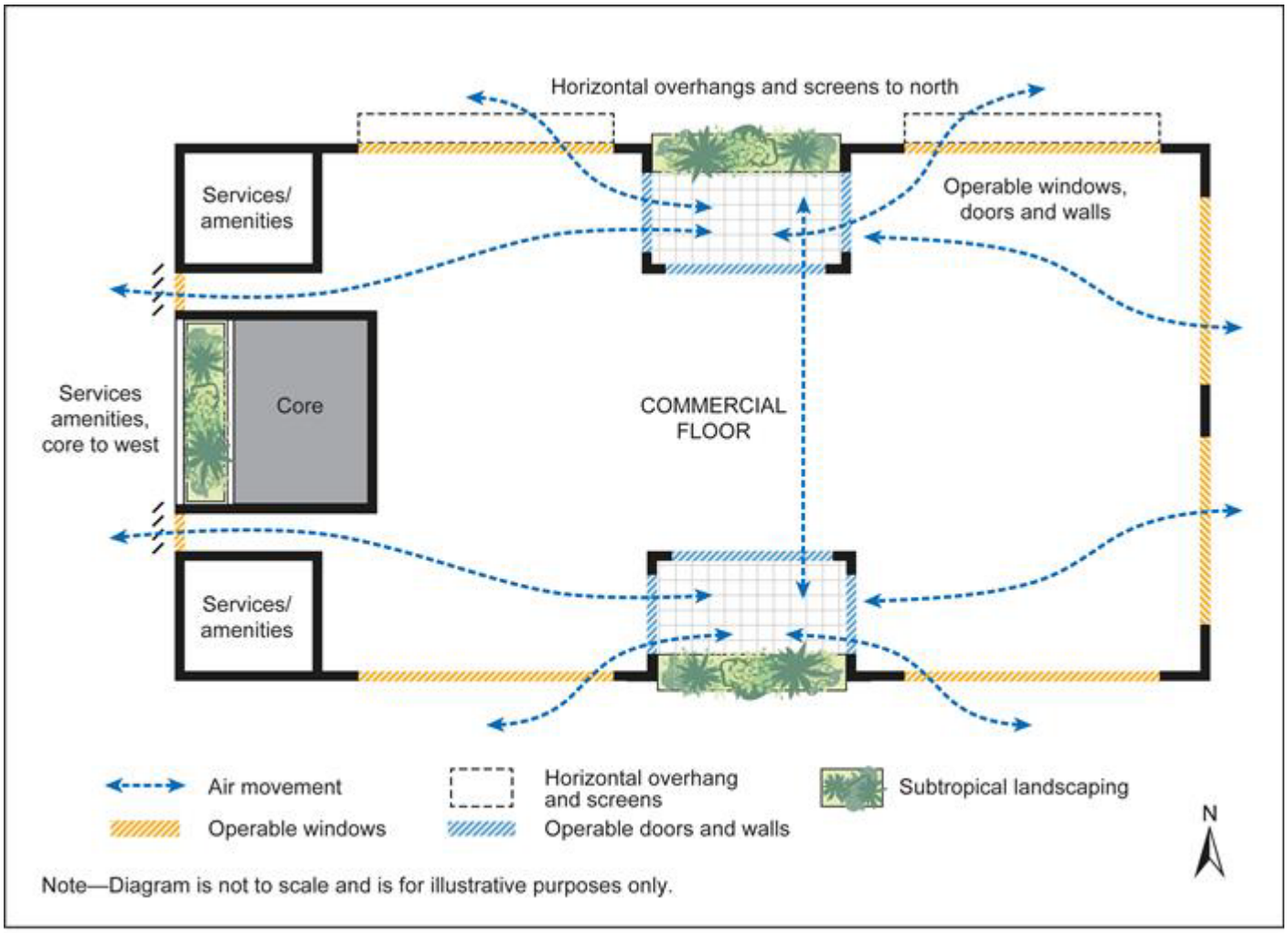

Figure x—Optimising natural ventilation for subtropical design outcomes – non-residential layout

View the high resolution of Figure x—Optimising natural ventilation for subtropical design outcomes – non-residential layout

4. The design of a building's facade can also have a significant impact on the ability for natural ventilation to perform effectively for residential and non-residential land uses. Design elements such as layered facades, external shading forms and devices, awnings and colonnades can be used to direct airflow towards smaller scale design features such as operable windows, doors, walls and openings to support natural ventilation. Refer to section 5 for further information.

5. The use of small scale design elements can be enhanced by incorporating integrated screens (such as security or insect screens) to further improve functionality and maintain an appropriate level of

amenity whilst mitigating unwanted impacts. Any proposed use of integrated screens should be designed by a suitably qualified professional.

6. Operable windows, doors and openings should be the primary elements to facilitate natural ventilation. Where natural ventilation is insufficient for occupant amenity, air intake units located on a building facade can be used to supplement air movement in a cost effective and sustainable manner. Hybrid or mixed ventilation systems can also be used to support airflow where the site location or external conditions are not suitable for natural ventilation, such as impacts from increased temperatures or humidity levels or from excessive noise or pollution. Sole use of hybrid or mixed ventilation systems is not considered to achieve subtropical design and is not supported.

4.5 Operable windows

1. Operable windows should be located, orientated and designed to facilitate natural ventilation and allow daylight into internal spaces. Operable windows can include slider windows, awning windows, casement windows, double hung windows and louvres.

2. The inclusion of operable windows should consider site location and orientation to ensure that outcomes sought for natural daylight and ventilation are balanced with amenity requirements (such as visual privacy) within and adjoining the site. For residential land uses, the placement of operable windows should avoid direct overlooking to other habitable rooms and spaces on or adjoining the development site. The use of privacy film or external screening as a primary means of facilitating privacy is not considered best practice subtropical design.

Note—Where the location and orientation of operable windows cannot avoid direct overlooking to other habitable rooms and spaces on an adjoining development site, shading or screening devices can be used to achieve the required amenity outcomes to satisfy a relevant assessment benchmark identified by a relevant code. Refer to section 5.2 for further information.

3. The location of operable windows should also consider position on the building to ensure that amenity and safety of internal habitable spaces is maintained. The use of operable windows should be avoided where high wind speeds are expected to occur. Where operable windows may not be appropriate, glazing or glass features should be considered to allow daylight penetration into internal spaces. Refer to section 4.2 for further information.

4. The use of operable windows should be combined with other design elements, such as layered facades, external shading forms and devices, colonnades and awnings, to provide weather protection measures to ensure that the impacts from a subtropical climate are appropriately managed for internal habitable spaces.

4.6 Doors, operable walls and openings

1. Doors, operable walls and openings provide a physical and visual connection between indoor and outdoor spaces and facilitate natural daylight and ventilation for buildings.

2. Doors and operable walls should be designed or selected to include operable features that function independently (such as integrated louvres) to enable continuous airflow through internal spaces. Natural ventilation that is only reliant on fully open doors or operable walls is not considered best practice subtropical design outcome. Doors and operable walls should also respond to the location of other operable elements to maximise natural ventilation to internal spaces. Refer to Figure y for guidance.

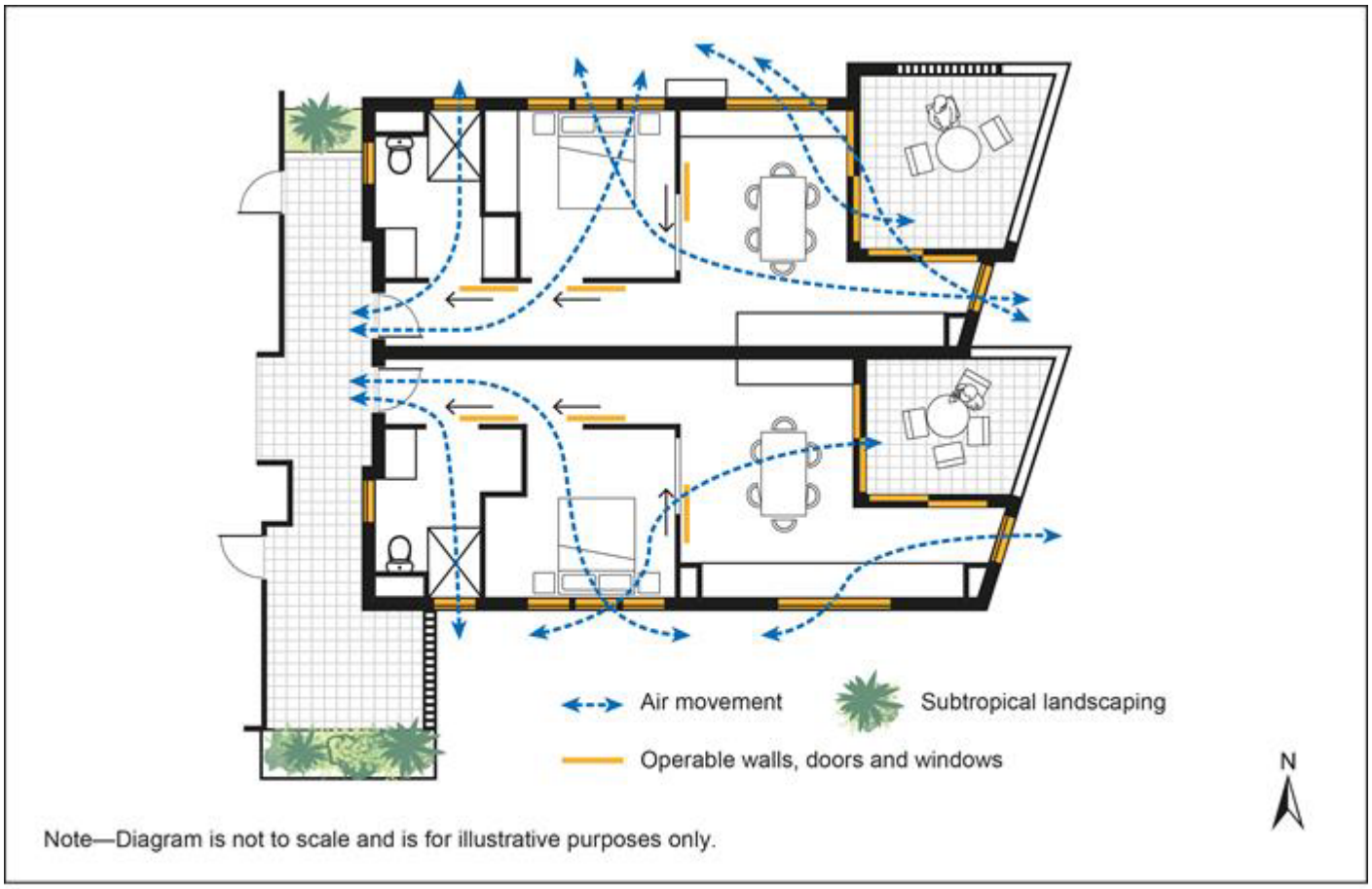

Figure y—Doors, operable walls and openings for subtropical design outcomes – residential layout

View the high resolution of Figure y—Doors, operable walls and openings for subtropical design outcomes – residential layout

3. Doors, operable walls and openings can also be designed or selected to feature screens or grilles to create semi-outdoor rooms that support access to natural daylight and ventilation.

4. Other design elements such as open corridors, breezeways or threshold spaces can facilitate natural daylight and ventilation, provide greater opportunity for the integration of subtropical landscaping and improve the function of operable windows, doors and walls. The following design approaches should be considered:
    a. open corridors or breezeways can provide links between the communal spaces in a building to facilitate natural daylight and ventilation and provide opportunities for subtropical landscaping. These features can also be incorporated to assist breaking down the bulk, scale and form of development. Refer to Figure z for guidance.

Reason for change: Post consultation change to Figure z. In response to submissions.

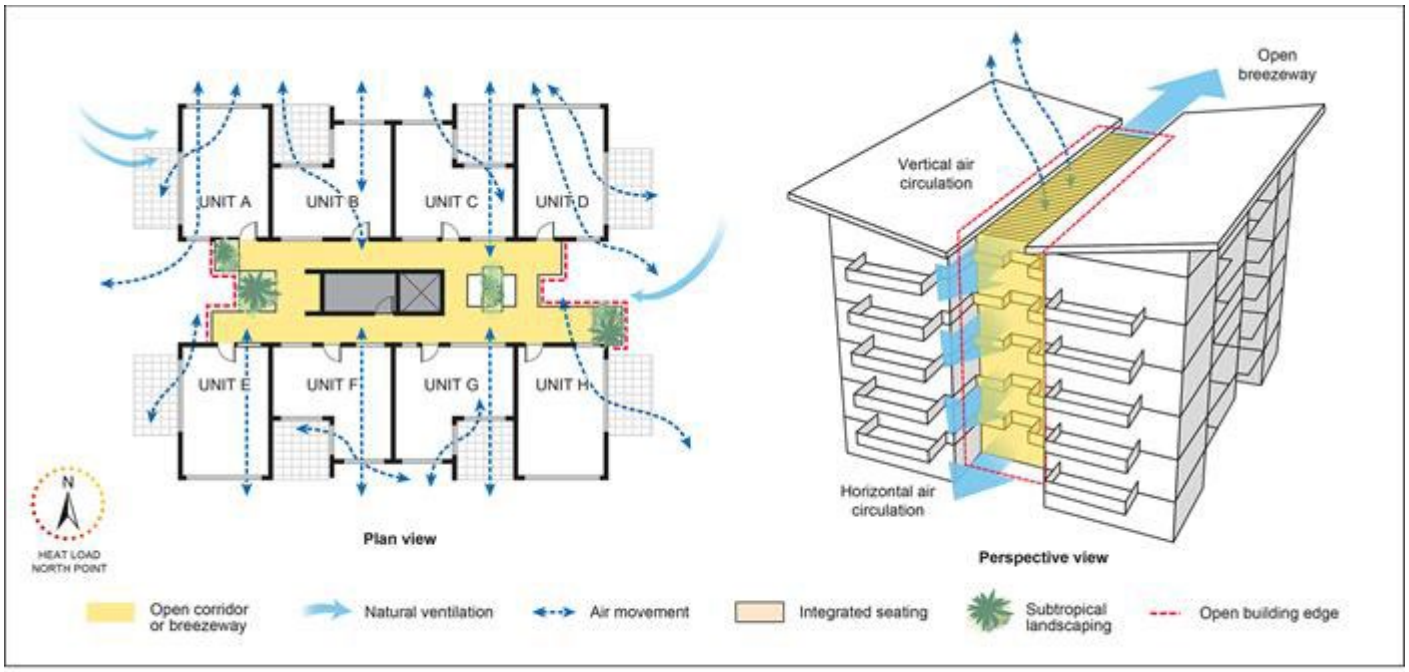

Figure z—Open corridors and breezeways for natural ventilation

View the high resolution of Figure z—Open corridors and breezeways for natural ventilation

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

b. threshold spaces can be used to provide a soft transition between private and communal spaces and encourage the implementation of operable windows and doors to facilitate natural daylight and ventilation. These spaces can be designed to incorporate subtropical landscaping in artificial growing environments, further improving occupant amenity. Refer to Figure aa for further guidance.

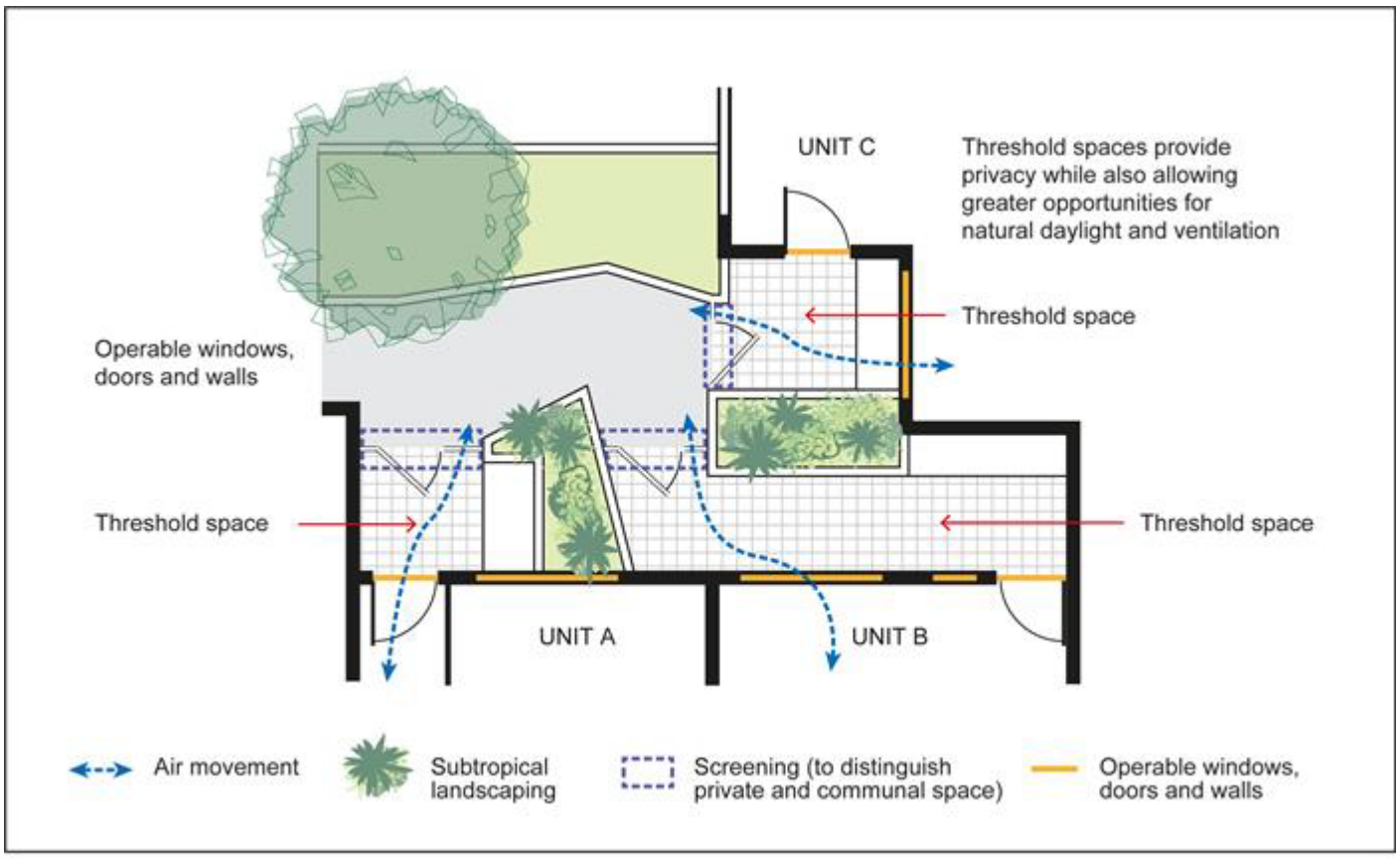

Figure aa—Threshold spaces for natural ventilation

View the high resolution of Figure aa—Threshold spaces for natural ventilation

5. When interfacing with the external environment, the use of doors, operable walls and other openings should be combined with other design elements such as layered facades, external shading forms or devices, colonnades or awnings, to provide weather protection measures to ensure that the impacts from a subtropical climate are appropriately managed for internal habitable spaces.

5 Shade and protection

1. Providing shade and weather protection is critical for ensuring new development is climate responsive and supports Brisbane's subtropical character and sustainable lifestyle. Shade and weather protection can be achieved through the following subtropical design approaches:
    a. layered facades;
    b. shade forms and devices;
    c. shade structures;
    d. awnings and colonnades.

2. The design element selected to provide shade and weather protection for each building, facade or outdoor space should respond to the location and orientation of the feature it serves. A one size fits all approach is not an appropriate subtropical design response.

5.1 Layered facade

1. A layered facade is a multi-layered facade system that includes an internal barrier of glazing with an outer solid facade layer, forming an intermediate cavity to facilitate the movement of air and provide shade to the external wall plane of the building.

2. Layered facades are encouraged on the northern and western facades of buildings where the impacts from solar exposure are greatest.

3. Layered facades can be used to:
    a. exhibit subtropical architectural excellence, defining the site and its setting through built form expression, silhouette, rhythm, scale and composition;
    b. contribute to the subtropical identity, local character, vibrancy and attractiveness of the private and public realm;
    c. minimise the bulk, scale and form of development, providing variations in the horizontal and vertical profile through modulation, articulation, textualisation and material difference of the external wall plane;
    d. provide protection and relief from a subtropical climate, facilitate opportunities to harness natural daylight and ventilation and improve material sustainability and longevity;
    e. improve occupant amenity by increasing building efficiency and performance by shading building facades to reduce unwanted heat transfer and minimise the need for artificial climate control measures;
    f. achieve the desired solar exposure while mitigating amenity impacts, such as reflectivity or heat transmission from glass or glazing;
    g. mitigate impacts from overlooking to maintain the privacy and amenity of building occupants;
    h. improve the performance of private and communal outdoor spaces by creating semi-outdoor rooms to support passive and active recreation;
    i. provide opportunities for living greenery elements and artwork to be integrated into the facade design. Refer to section 6 for further information.

Note—The integration of artwork into the facade design is not considered to meet the requirements for public art under relevant assessment benchmarks. The incorporation of artwork into the facade design may however, contribute to the architectural excellence defining the site and its setting through built form expression, silhouette, rhythm, scale and composition.

4. Layered facades can be achieved through a variety of design methods, however, at a minimum are to include an inner and outer layer forming a central cavity. Depending on how these components are designed, this can provide shade to a building's facade, facilitate cool air movement through the

intermediate cavity or enable the extraction of warm air from internal spaces through the intermediate cavity or the outer solid facade layer. Refer to Figure bb for further guidance.

Reason for change: Post consultation change to Figure bb. New planning information to update legibility of figure.

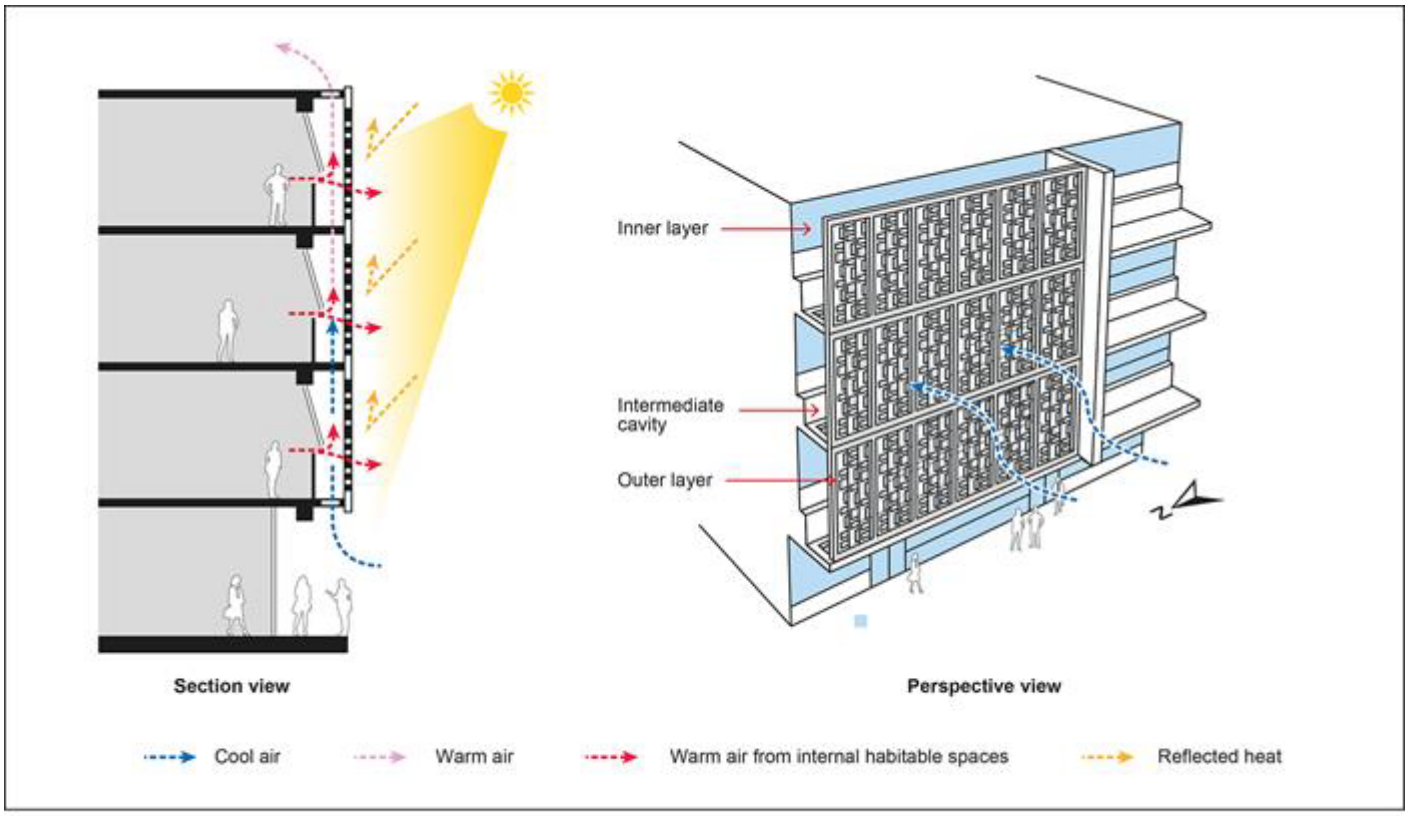

Figure bb—Layered facades – design element

View the high resolution of Figure bb-Layered facades - design element

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

5. Layered facades can contribute to Brisbane's subtropical character and provide a unique identity to a building through distinctive design and material choices. Materials used for layered facades should be selected for their contribution to the character of the site and be of a suitable durability and high-quality finish that is easily maintained and sustainable. This can include:
    a. panels or battens (metal or timber);
    b. tiles (metal or timber);
    c. perforated metal blades or fins;
    d. perforated brick or terracotta tiles;
    e. concrete precast blades and shade elements;
    f. slab overhangs combined with other shading elements;
    g. trellis structures that support living greenery. Refer to section 6 for further information.

Note—The examples provided for design and material choices for layered facades is not exhaustive. Other designs and materials can be supported where they achieve the outcomes of this planning scheme policy.

Note—Materials used for layered facades should not readily stain, discolour or deteriorate. Refer to section 7 for further information.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Landscape design planning scheme policy
- Planting species planning scheme policy

6. Layered facades can be strategically located on podiums to promote visual interest, provide a sense of place and to exhibit a richly detailed, human-scale and fine grained building rhythm. Layered facades can also provide sufficient articulation and modulation of the external wall plane to mitigate the impacts of ground level wind acceleration on pedestrians and building occupants.

7. Where required to achieve the desired level of amenity for building occupants, layered facades can integrate hybrid or mixed ventilation systems. Refer to section 4 for further information.

8. Layered facades that only include multiple layers of glazing are not considered to achieve subtropical design outcomes and are not supported.

5.2 Shading forms and devices

1. Shading and weather protection can be achieved through consideration of the built form or by including smaller scale design elements, such as shading devices on the external facade or inside the building. Shading forms and devices provide for functional and climate responsive design and should be used to:
    a. exhibit subtropical architectural excellence, defining the site and its setting through built form, expression, silhouette, rhythm, scale and composition;
    b. minimise the bulk, scale and form of development through modulation, articulation, textualisation and material variation of the wall plane;
    c. provide protection and relief from the subtropical climate, facilitate opportunities to harness natural daylight and ventilation and improve material sustainability and longevity;
    d. improve occupant amenity by increasing building efficiency and performance by shading building facades to reduce unwanted heat transfer and minimise the need for artificial climate control measures;
    e. achieve the desired solar exposure while mitigating requirements for visual privacy of building occupants and other amenity impacts, such as reflectivity or heat transmission from glass or glazing;
    f. improve the performance of private and communal outdoor spaces by creating semi-outdoor rooms to support active and passive recreation;
    g. provide opportunities for living greenery, such as vertical greenery or elevated gardens and artwork to be integrated into the facade design. Refer to section 6 for further information.

Note—Shading devices should not be used as a primary means to facilitate privacy as this should as much as possible be achieved through optimal location and orientation unless required to satisfy a relevant assessment benchmark.

Note—The integration of artwork into the facade design is not considered to meet the requirements for public art under the relevant assessment benchmarks. The incorporation of artwork into the facade design may however, contribute to the architectural excellence, defining the site and its setting through built form expression, silhouette, rhythm, scale and composition.

2. Shading incorporated through the built form should have sufficient depth to provide shade and weather protection in a subtropical climate. Shading can be incorporated through:
    a. roof form and eaves;
    b. recesses and projections in the built form, slab overhangs, balconies, sheltered walkways or breezeways.

3. Small scale shading devices can either be included in internal habitable areas or located on the external facade. These shading devices can include:
    a. where fixed to internal areas, automated or manual blind systems and awnings;
    b. where on the external facade, battens, blinds (automated or manual), screening, lattice, shutters, vertical or horizontal fins or blades and trellis structures that support living greenery elements. Shading devices located on the external facade of a building should have a minimum 600mm depth to the external wall plane to provide adequate shade and weather protection and maintenance access required for the building facade.

Figure cc provides an example of small scale shading devices.

Note—Automated or manual blind systems and awnings included in internal areas only provide shade to building occupants and do not contribute to the subtropical architectural excellence or minimisation of the bulk, scale and form of the building.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Landscape design planning scheme policy
- Planting species planning scheme policy

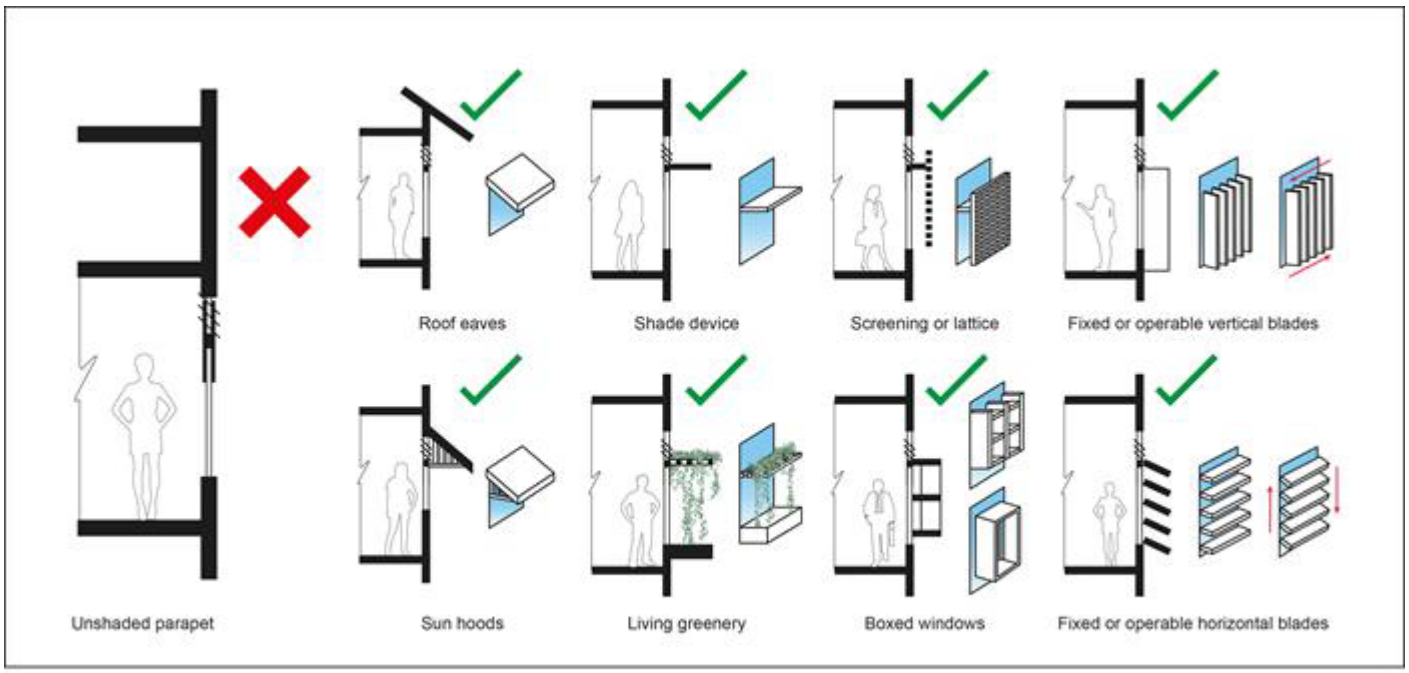

Figure cc—Examples of external shading devices

View the high resolution of Figure cc—Examples of external shading devices

4. Materials used for shading devices should be selected for the contribution they make to the character of the site and be of a suitable durability and high quality finish to be easily maintained and sustainable. Refer to section 7 for further information.

Note—Materials used for shading devices should not readily stain, discolour or deteriorate.

5. Shading devices should seek to incorporate operable components to provide a tailored, flexible and responsive approach to weather conditions and improve overall occupant amenity.

6. Shading devices are encouraged on the northern and western facades of buildings where the impacts from solar exposure are greatest. When considering shading on development, the following design approaches should also be considered:
    a. where located on the northern facade, include a combination of adjustable horizontal or vertical screening elements, recesses, slab overhangs and vertical landscaping trellises;
    b. where located on the western facade, include a combination of fixed vertical fins or blades, vertical screening elements and a combination of slab overhangs to operable windows, operable screens to balconies, recesses in the facade and vertical landscaping trellises;
    c. where located on the eastern facade, respond to site specific circumstances and subtropical design needs.

7. For residential and non-residential development, shading devices form a critical function in providing protection and relief from a subtropical climate, improving the amenity of internal habitable spaces and providing attractive and functional communal and private outdoor spaces.

5.3 Shade structures

1. Shade structures are independent design elements, incorporated into the design of private and communal outdoor spaces or the public realm to provide shade and weather protection from a subtropical climate. These features improve occupant comfort for outdoor activities and living and encourage occupancy year round, supporting Brisbane's subtropical character and sustainable lifestyle.

2. Shade structures can include sheltered walkways, free standing shade structures or trellises with living greenery planted in natural ground or in artificial growing environments.

Note—The examples provided for shade structures is not exhaustive. Other structures can be supported where they achieve the outcomes of this planning scheme policy.

3. The location and design of shade structures and features incorporated into new development will be dependent on the bulk, scale and form, intensity of development and proposed land use. Irrespective of these features, shade structures will exhibit the following attributes:
    a. subtropical architectural excellence and integrated and consistent with the overall design language and theme of the development;
    b. be constructed out of durable and high quality materials that are easily maintained and do not readily stain, discolour or deteriorate;
    c. where located on the roof of a podium or tower, shade structures should be permanently affixed to the building.

4. Where these elements are proposed to support the function of communal outdoor spaces, the size and number of shade structures should be adequate to provide shade and weather protection to multiple separate groups of people to maximise outdoor living opportunities and enhance amenity for building occupants.

5. Shade structures can be strategically located on the ground plane to mitigate the impacts of ground level wind acceleration on pedestrians and building occupants.

6. Where shade structures include living greenery elements, refer to section 6 for further information.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Landscape design planning scheme policy
- Planting species planning scheme policy

5.4 Awnings and colonnades

1. Awnings and colonnades provide protection and relief from the subtropical climate at the building interface between indoor and outdoor spaces. Awnings and colonnades improve the amenity of the ground floor of buildings, creating comfortable, useable and occupiable spaces that promote street activation between the private and public realm. Colonnade spaces are an evolution of the Queensland verandah vernacular, supporting Brisbane's subtropical character and sustainable lifestyle. Refer to Figure dd for further guidance.

Reason for change: Post consultation change to Figure dd. In response to submissions.

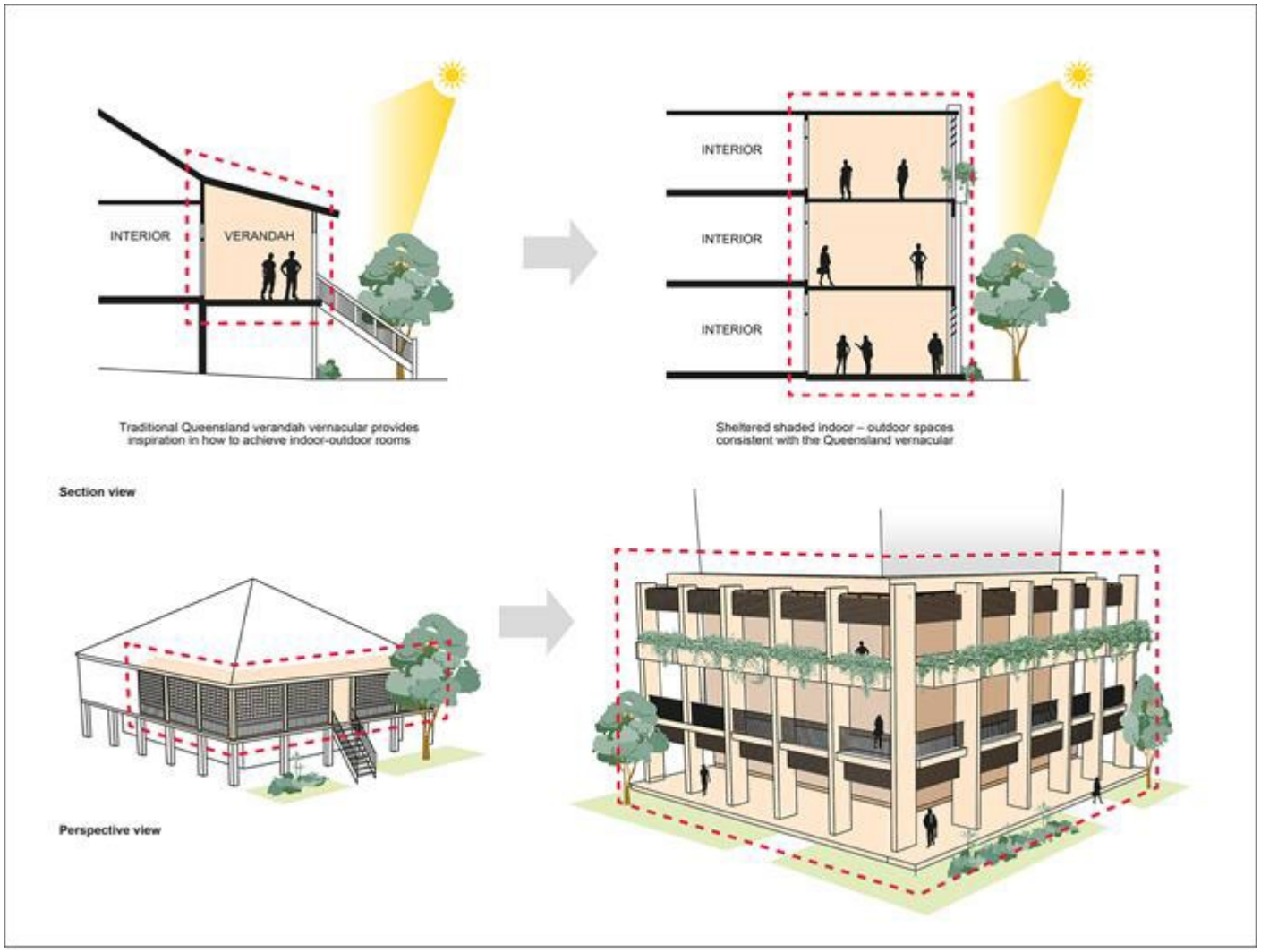

Figure dd—Evolution of the traditional subtropical design approaches to modern development typologies

View the high resolution of Figure dd—Evolution of the traditional subtropical design approaches to modern development typologies

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

2. The use of awnings and colonnades is encouraged on the lower levels of buildings, where there is an interface between the private and public realm. This includes pedestrian footpaths and entrances, plazas, laneways, arcades and other outdoor public spaces.

3. Awnings and colonnades are designed to be visually interesting, interactive and continuous with the built form and rhythm of the public realm. These elements support neighbourhood and street character and provide for vibrant and attractive streets.

4. The design of awnings and colonnades will respond to the location and the proposed land use. These features can either be solid or lightweight and feature living greenery to improve the subtropical landscape character of the development and the public realm.

5. The design of awnings and colonnades should also incorporate the following approaches:
    a. new structures should reference a consistent height datum to the streetscape or adjoining development to provide a sense of continuity in the streetscape and the public realm;
    b. avoid conflicts between structures and existing or future vegetation (such as street trees);
    c. structures should maintain a visual connection to a building entrance or lobby by signposting through architectural features;
    d. structures should preserve an appropriate level of illumination to maintain legibility and provide a clear line of sight for the occupants and users. Artificial measures of illumination can be supported by natural daylight incorporated through the use of stippled or fitted glass with UV protection;
    e. materials used for awnings and colonnades should be selected for their contribution to the character and function of the site and be of a durable and high quality finish that can be easily maintained and not readily stain, discolour or deteriorate. High quality materials and variation should be sought to the soffit of awnings and colonnades to provide a high quality subtropical design response to the public realm.

6. Awnings and colonnades can also be strategically located to mitigate the impacts of ground level wind acceleration to ensure a safe and amenable environment for pedestrians and building occupants.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Infrastructure design planning scheme policy
- Landscape design planning scheme policy

- Planting species planning scheme policy

6 Living greenery

1. Subtropical landscaping on the ground plane or in artificial growing environments is a critical component of subtropical building design, contributing to Brisbane's subtropical character and sustainable lifestyle. Subtropical landscaping can:
    a. enhance the visual presentation of new development by balancing the built form and areas of hardstand, improving the amenity of buildings and the public realm;
    b. provide a unique sense of place and contribute to a human scale design that is consistent with the form and character intent of the neighbourhood and street;
    c. ensure that new development fits within its surrounds;
    d. improve building performance and reduce energy consumption;
    e. improve the microclimate of the site, surrounding public realm and reduce the impact of the urban heat island effect;
    f. provide greater opportunity for onsite stormwater retention, minimising runoff and improving water quality;
    g. provide opportunities to support urban biodiversity;
    h. provide opportunities for urban food production.

2. Subtropical landscaping can be incorporated into new development through a variety of approaches, including traditional ground plane landscaping such as garden beds, deep planting, retention of existing significant vegetation and other soft landscape features, containerised planting on the ground plane or on structure, or innovative landscape solutions such as green infrastructure including green roofs (intensive or extensive), green walls or green facades. Planting can also be designed to feature in internal environments to improve the amenity and aesthetic of habitable spaces.

Note—Landscaping is to be provided in accordance with the relevant assessment benchmark identified in the relevant code. City Plan does not provide guidance on the requirements for internal planting, however, internal planting can contribute to the amenity and aesthetic of internal spaces for new development. Any proposal for planting located in internal spaces should seek guidance from a suitably qualified design and landscape professional to ensure successful establishment, optimum growth and long-term survival.

3. Subtropical landscaping located on the ground plane or in artificial growing environments should not be considered as an isolated component of a subtropical design response. All areas of subtropical landscaping should form an integrated network supporting the functional, aesthetic and amenity needs of the site while contributing to ecosystem service benefits.

4. The location of subtropical landscaping should be prioritised where there is a degree of physical or visual engagement with building occupants and the public realm.

5. Although subtropical landscaping can achieve the desired amenity and aesthetic outcomes of new development, innovative subtropical landscaping such as green infrastructure can also deliver the required social, economic and environmental outcomes of other assessment benchmarks without having to sacrifice additional space or resources. Opportunities to include green infrastructure to perform the functional requirements of a development is sought and encouraged. This may include:
    a. utilising water sensitive urban design measures to achieve the required stormwater quality outcomes or reduce the quantity of stormwater runoff;
    b. shading to buildings to reduce the need for artificial climate control measures and ensure appropriate amenity outcomes for internal spaces;
    c. screening to ensure the privacy and amenity of the building's occupants;
    d. minimising the available canvasses or limiting access to reduce opportunities for graffiti or vandalism.

Note—The above examples are intended to guide the consideration of green infrastructure as an integral component in the function of new development whilst also providing benefits for amenity and aesthetic outcomes. Any use of green infrastructure to support the function, amenity and aesthetic outcomes should be selected by a suitably qualified design professional.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy
- Graffiti prevention planning scheme policy
- Infrastructure design planning scheme policy
- Landscape design planning scheme policy
- Planting species planning scheme policy
- Vegetation planning scheme policy

6. The use of green infrastructure systems should respond to the site context and scale of proposed development. Opportunities to incorporate green infrastructure systems into the surrounding network are sought and encouraged.

7. Subtropical landscaping can be integrated into other design elements to improve the functional, amenity and aesthetic outcomes of the respective elements. The integration of subtropical landscaping is sought and encouraged in the following elements:
    a. occupy outdoor spaces;
    b. natural daylight and ventilation;
    c. shade and protection.

6.1 Vertical greenery and elevated gardens

1. Vertical greenery and elevated gardens are an important aspect for achieving the desired amenity and aesthetic outcomes of subtropical design and can significantly contribute to Brisbane's subtropical character and sustainable lifestyle. These features can either be grown in natural ground

or in artificial growing environments and can include green roofs, green walls, green facades or planting on structure. The Landscape design planning scheme policy provides further guidance on the technical design requirements for the design and delivery of subtropical landscape features.

Note—The examples provided for vertical greenery, elevated gardens and green infrastructure are intended to provide examples of these elements to support their implementation in subtropical design and landscaping. Other forms and design approaches for these elements can be supported where they facilitate the outcomes of this planning scheme policy.

2. Vertical greenery and elevated gardens can be used in a subtropical design response to:
    a. exhibit subtropical architectural excellence, defining the site and its setting through built expression, silhouette, rhythm, scale and composition;
    b. contribute to subtropical identity, local character, vibrancy and attractiveness of the private and public realm;
    c. minimise the bulk, scale and form of development through modulation, articulation, variation of texture and materials to the wall plane or provide expressive shadow casting elements;
    d. provide protection and relief from the subtropical climate, facilitate opportunities to harness natural daylight and ventilation and improve material sustainability and longevity;
    e. improve occupant amenity by increasing building efficiency and performance by shading building facades to reduce unwanted heat transfer and minimise the need for artificial climate control measures;
    f. achieve the desired solar exposure while mitigating requirements for visual privacy of the building occupants and other amenity impacts such as reflectivity or heat transmission from glass or glazing;
    g. improve the performance of private and communal outdoor space by creating semi-outdoor rooms to support active and passive recreation.

3. In high density urban settings, the use of vertical greenery and elevated gardens should span across multiple levels of tower design to improve the overall appearance of the development and provide equitable access and visual connection to landscape elements for all building occupants. Vertical greenery and elevated gardens can also improve the amenity of the skyline, providing visual relief between towers and improving the outlook for building occupants from other buildings and public vantage points. Refer to Figure ee for further guidance.

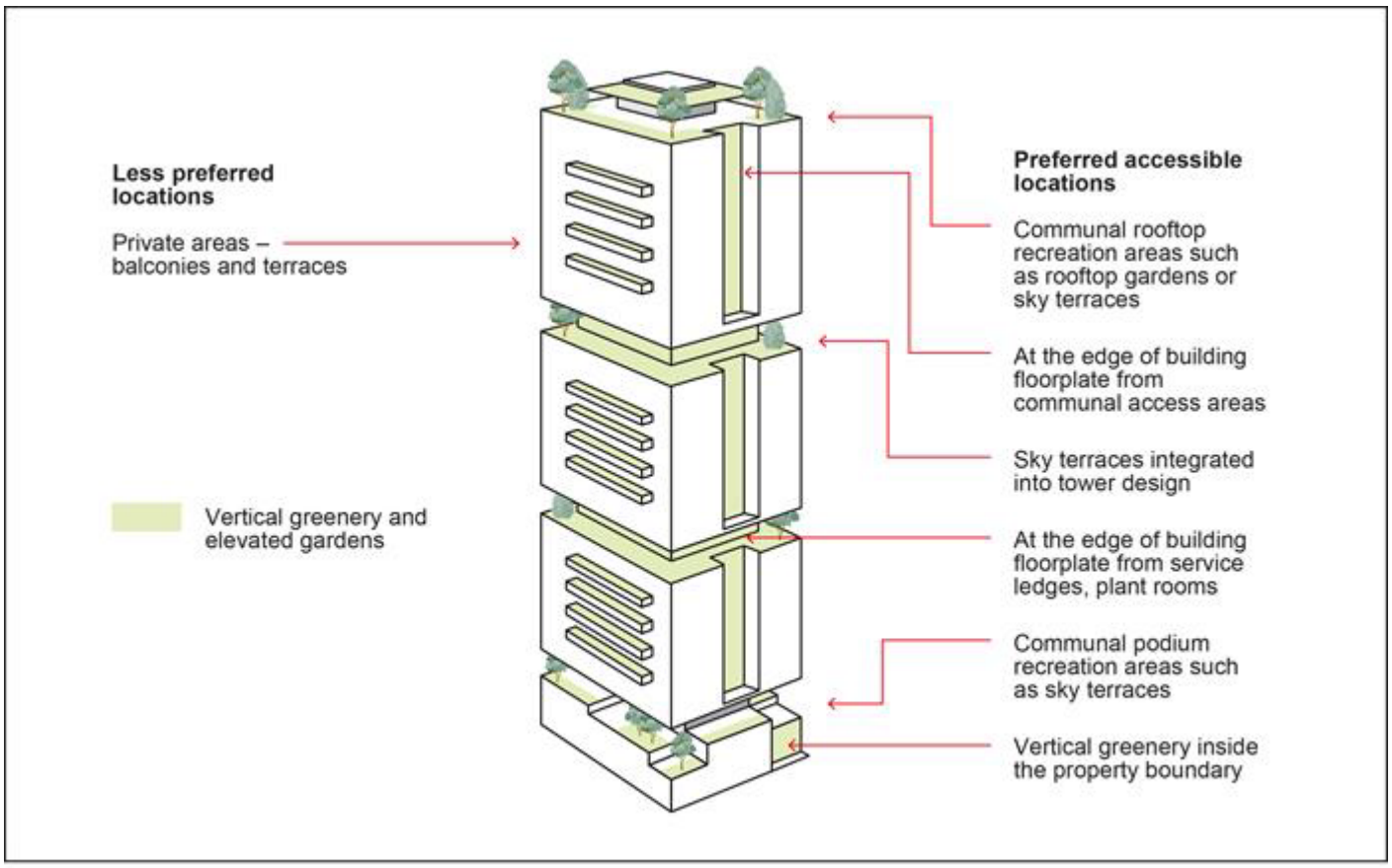

Figure ee—Distribution of living greenery

View the high resolution of Figure ee—Distribution of living greenery

4. The use of vertical greenery and elevated gardens is encouraged on the lower levels of new development to improve the amenity and aesthetic outcomes of the private and public realm.

5. Artificial growing environments require an increased level of maintenance to ensure vegetation achieves successful establishment, optimum growth and long-term survival. To facilitate required maintenance activities, access to artificial growing environments should be located and designed to be easily accessible and minimise maintenance expenditure and occupant disruption.

Note—Minimising maintenance expenditure may include but not necessarily be limited to, designing artificial growing environments to have direct access and not requiring specialised equipment such as elevated platforms or abseiling for the maintenance of the artificial growing environment or vegetation. Appropriate species selection can reduce the need for maintenance, however, is not suitable as the sole response to reducing maintenance tasks for artificial growing environments.

6. Access to artificial growing environments can be achieved through careful consideration and design of a building's floorplate early in the design process. Where possible, access to artificial growing environments should be achieved through communal spaces that limit the need for specialised equipment or access through private access points. This can be achieved through the following design approaches:
    a. vertical greenery and elevated gardens should be integrated into subtropical design through a variety of approaches and methods that have different points of access throughout the building;
    b. areas of communal open space should maximise the use of vegetation to provide aesthetically pleasing outdoor spaces;
    c. when integrating vegetation into the design of towers or elevated areas, access to artificial growing environments from service ledges, plant rooms or common lobby floor areas located on the edge of a building's floorplate is encouraged;
    d. artificial growing environments located on private areas of open space (such as balconies) should not be the primary method of integrating vertical greenery or elevated gardens on a building;
    e. locating vertical greenery or elevated gardens inside a property boundary with sufficient room for maintenance access to avoid disruption to the operation and function of the public realm.

Refer to Figure ff for further guidance.

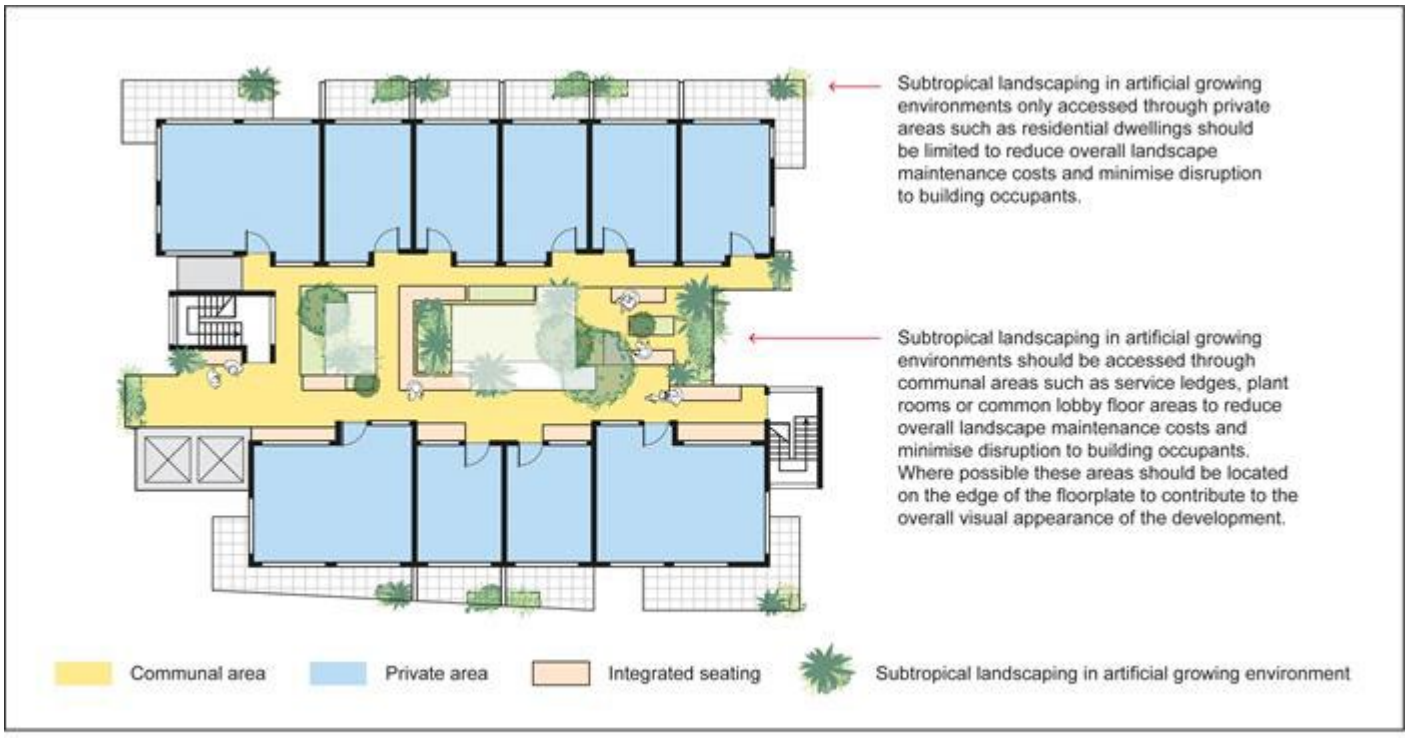

Figure ff—Access and layout of artificial growing environments

View the high resolution of Figure ff—Access and layout of artificial growing environments

7 Identity matters

1. The choice and use of materials for buildings and outdoor spaces and the integration of public art and creative lighting can provide a visual expression of the city's history, culture and identity, enliven and add vibrancy to the public and private realm and contribute to Brisbane's subtropical character and sustainable lifestyle.

7.1 Choice and longevity of materials

1. The choice and longevity of materials is a critical component of subtropical design, contributing to Brisbane's subtropical character and sustainable lifestyle. Materials should respond to our city's history, local character and identity whilst depicting the existing materiality, articulation, granularity and rhythm of the private and public realm.

2. Although the choice and use of materials will vary, all materials used should be fit for purpose, high quality and sustainable to ensure success and optimal performance for the lifetime of the building and outdoor space.

3. Material selection should not be considered in isolation and should form part of the holistic design response that achieves continuity in the design of building and outdoor spaces between the private and public realm. The colour of materials should be carefully selected to reduce unwanted impacts, such as increased heat absorption or reflectivity that impact on the ability of buildings and outdoor spaces to contribute to Brisbane's subtropical character and sustainable lifestyle.

4. Building facades can be designed to feature combinations of transparent and solid materials to provide greater articulation and depth and improve the building aesthetic when viewed from the public realm.

5. Innovative approaches and the creative application of materials to contribute to Brisbane's subtropical character and sustainable lifestyle is encouraged.

6. The choice and use of materials for buildings and outdoor spaces should also consider:
    a. minimising waste through reuse of existing onsite resources, incorporating adaptable design principles, using low waste construction systems, featuring standard modular sizes, or facilitating demountable construction;
    b. incorporating recycled materials, renewable resources and locally sourced materials;
    c. utilising technology to manage and record embodied energy and carbon with a view of promoting climate resilience. Refer to section 8 for further information.

Note—The outcomes outlined above are for the purposes of amenity and aesthetics in supporting subtropical design outcomes of buildings and outdoor spaces. Any approach must not result in non-compliance with the building assessment provisions identified in the *Building Act 1975* or other relevant legislation.

7.2 Public art

1. Incorporating public art into the design of buildings and outdoor spaces can contribute to the human experience and enrich the city's global identity, subtropical character and sustainable lifestyle. Public art should respond to site-specific circumstances, including the site's history, culture, identity and context.

2. Public art should:
    a. enrich our global identity;
    b. contribute to the experience of buildings, outdoor spaces and the public realm;
    c. share stories, history and culture;
    d. contribute to the interpretation of places and people.

Note—Public art is not required for new development unless specified in a relevant assessment benchmark of a relevant code.

3. The design and installation of public art requires consultation with Council. The Infrastructure design planning scheme policy provides further information and guidance.

7.3 Creative lighting

1. Creative lighting includes innovative concepts for the illumination of buildings and outdoor spaces that showcase the city's architecture, enliven the streetscape and add vibrancy to the private and public realm outside of daylight hours. Where creative lighting is proposed, lighting should:
    a. not interfere with the functional needs of development;
    b. not adversely impact on the amenity of building occupants, operation or function of adjoining land uses or the natural environment, including native fauna and flora;
    c. support creative expression and visibility at night time;
    d. be sustainable.

Note—Creative lighting is not required for new development unless specified in a relevant assessment benchmark of a relevant code. Any proposal for creative lighting requires consultation with Council.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Infrastructure design planning scheme policy

8 Reduce energy and waste

1. Development integrates the subtropical design elements and supporting principles of this planning scheme policy to provide for climate responsive design and improve the amenity of buildings and outdoor spaces. To support these outcomes strategies and technology that reduce the consumption of energy, minimise the production of waste and promote active travel are encouraged.

8.1 Energy and technology

1. Development is encouraged to incorporate existing, new and emerging technology to improve the operation and function of buildings and outdoor spaces. Any use of energy and technology should be used to support the function and operation of buildings and outdoor spaces that have been designed in accordance with the subtropical design elements and supporting principles of this planning scheme policy. Existing, new and emerging technology should not replace any approach to subtropical design, only advance its purpose and performance.

Reason for change: Post consultation change. In response to submissions and renumbering.

2. Development is encouraged to include technology to support subtropical design outcomes. This may include:
    a. solar panels and battery storage;
    b. chilled beam or district cooling technologies to reduce the reliance on or the need for independent air-conditioning systems;
    c. intelligent or automated lighting systems to minimise energy consumption when internal and external areas are not in use.

Reason for change: To convert the subtropical design outcomes of the New World City Design Guide - Buildings that Breathe into a new planning scheme policy.

Note—Chilled beam technology is a natural convection HVAC system designed to heat and cool large internal spaces using water.

Note—District cooling involves the cooling of water within a centralised plant for distribution through a connected network of buildings to provide them with air conditioning. Once used, water is then returned to a centralised plant for cooling to be reused again in a closed loop network.

Note—The examples provided are not exhaustive. Other existing and emerging technologies that improve the function and operation of buildings and outdoor spaces may be supported where they achieve the outcomes of this planning scheme policy.

Note—The use of technology in development to support subtropical design outcomes for the purposes of amenity and aesthetics must not result in non-compliance with the building assessment provisions identified in the *Building Act 1975* or other relevant legislation.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Infrastructure design planning scheme policy

8.2 Waste and water

1. Development is encouraged to consider the adaptive reuse of existing buildings and structures or recycle existing onsite materials to save embodied carbon.

2. Development is encouraged to integrate waste disposal systems such as improved chute technology or organic waste management systems to reduce the amount of waste produced on site.

3. Development is encouraged to incorporate subtropical design, water sensitive urban design and other strategies to improve water quality and reduce the quantity of stormwater runoff. This includes strategies to reduce water consumption, harvest water from the rooftops of buildings, structures and open spaces and provide water tank storage.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Infrastructure design planning scheme policy
- Refuse planning scheme policy

8.3 Active transport

1. Development provides accessible, high quality, safe and secure end-of-trip facilities to promote the use of sustainable modes of active transport and reduce reliance on motor vehicles.

Note—End-of-trip facilities are not required for new development unless specified in a relevant assessment benchmark of a relevant code.

2. Access to end-of-trip facilities should be direct, convenient, safe and clearly identified for occupants and visitors. Access to end-of-trip facilities should minimise any potential conflicts between motor vehicles and pedestrians.

3. Development that includes end-of-trip facilities considers all active transport modes, including e-mobility devices and provides additional storage and charging areas to accommodate these.

Note—The following planning scheme policies should be referred to for further guidance and information:

- Crime prevention through environmental design planning scheme policy

- Transport, access, parking and servicing planning scheme policy

8.4 Certification

1. The use of industry recognised certification systems to provide independent ratings for the sustainable design and operation of buildings and outdoor spaces is encouraged.

Note—Examples of certification systems may include but is not necessarily limited to, systems that measure and rate the performance of energy reduction, water efficiency, waste minimisation and overall performance of a development, including buildings and outdoor spaces.

Appendix 2 Table of amendments

Table AP2.1—Table of amendments

Reason for change: Reflect the details of this package of amendments.

6 August 2024 (adoption) and 13 September 2024 (effective)	v30.00/2024	Planning scheme policy amendment and minor	Amendment to planning scheme policy (Chapter 3, Part 1 of *MGR*). Minor amendment to planning scheme (Schedule 1, Section 2f) of *MGR* Refer to Amendment v30.00/2024 for further detail.