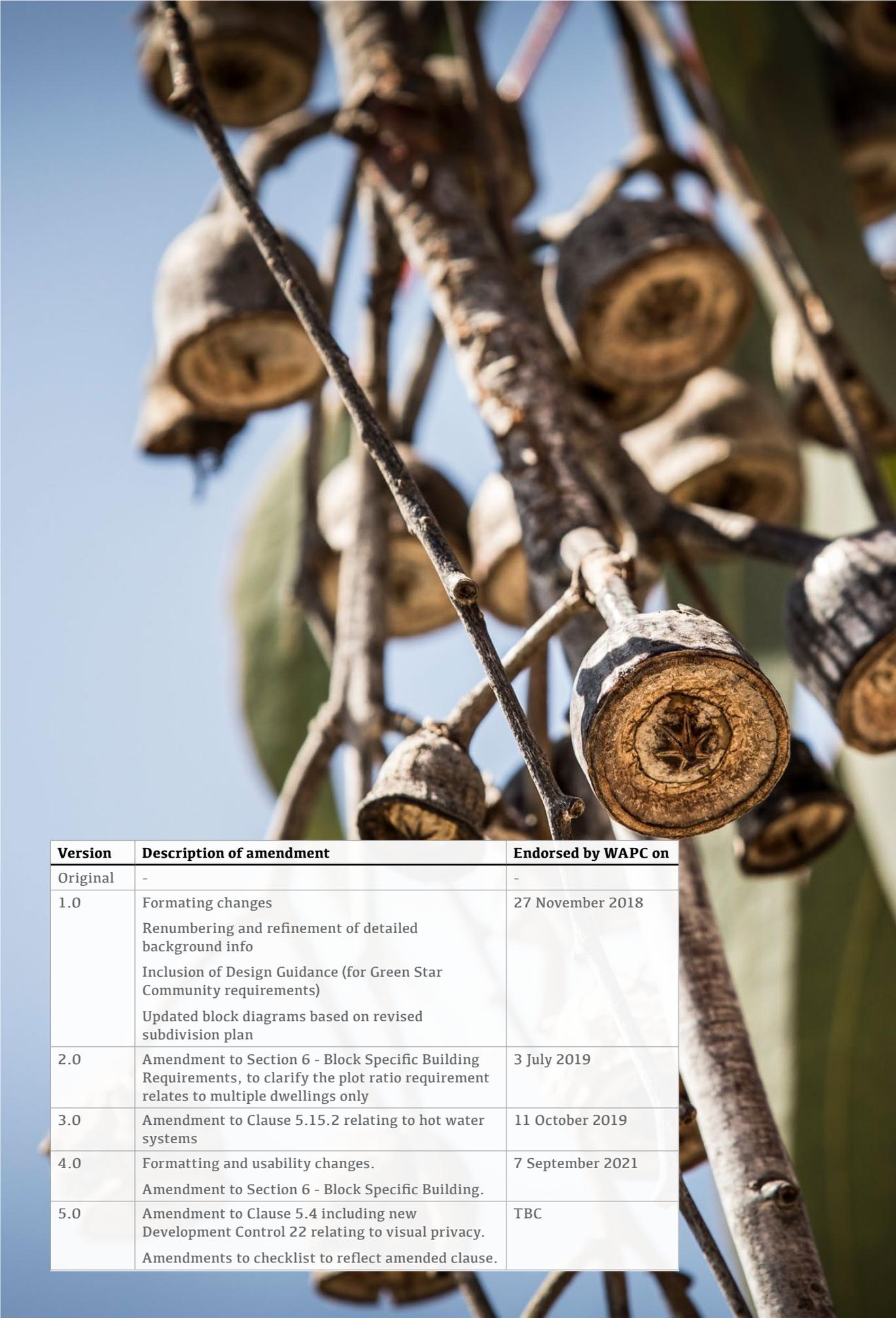




AREA B DESIGN GUIDELINES  
FEBRUARY 2024



<b>Version</b>	<b>Description of amendment</b>	<b>Endorsed by WAPC on</b>
Original	-	-
1.0	<p>Formatting changes</p> <p>Renumbering and refinement of detailed background info</p> <p>Inclusion of Design Guidance (for Green Star Community requirements)</p> <p>Updated block diagrams based on revised subdivision plan</p>	27 November 2018
2.0	Amendment to Section 6 - Block Specific Building Requirements, to clarify the plot ratio requirement relates to multiple dwellings only	3 July 2019
3.0	Amendment to Clause 5.15.2 relating to hot water systems	11 October 2019
4.0	<p>Formatting and usability changes.</p> <p>Amendment to Section 6 - Block Specific Building.</p>	7 September 2021
5.0	<p>Amendment to Clause 5.4 including new Development Control 22 relating to visual privacy.</p> <p>Amendments to checklist to reflect amended clause.</p>	TBC

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# 1.0 INTRODUCTION

“The future redeveloped Montario Quarter site offers the next evolution of inner city living - an urban village within a landscaped setting. Showcasing a choice of multigenerational housing, affordable living, and local amenity, Montario Quarter retains a selection of distinctive trees to create a neighbourhood with a feeling of security and privacy, with clear connections to the train station and surrounds”



## 1.1 VISION

This vision is underpinned by the following project objectives:

### Community

- Demonstrate a liveable and interactive urban development.
- Create a sense of place with a strong focus on accessibility and rehabilitation through interpretation of the site's heritage.
- Build community capacity through the provision of social amenity.
- Improve the physical health of the community and promote social well-being by fostering a public realm that encourages active and passive recreation.

### Design

- Celebrate the cultural and heritage aspects of the site in retained built form, and in the design of the public realm and landscape.
- Provide a safe, permeable, accessible and connected public realm with links to surrounding areas and transport options.
- Provide accessible and flexible buildings and a public realm that responds to its context.
- Ensure new residents and visitors have a sense of belonging and connection to the previous use of the site by celebrating built and social history.

### Economic

- Promote business and employment opportunities, including opportunities for home based business.
- Meet government objectives by achieving inner-urban infill dwelling targets whilst ensuring project viability.
- Provide a range of building typologies that offer differing price points, to deliver a diverse local community.

### Environment

- Retain and enhance ecological links to create opportunities for passive recreational amenity in collaboration with local community.
- Encourage climate-responsive design both in the design of built form and the public realm.
- Promote water sensitive urban design techniques throughout the streetscape and public realm and encourage recycled water or rainwater tanks.
- Reduce the 'urban heat island' effect by the retention of mature trees where possible, and planting of appropriate street trees.

## 1.2 HERITAGE

Montario Quarter is located on the site of the former Shenton Park Rehabilitation Hospital which was run as an annexure to Royal Perth Hospital. The site had been used for this purpose since the hospital was established in 1893 as a quarantine camp to assist in the management of the small pox epidemic.

Associated medical, teaching and institutional uses were conducted on the site, including several buildings occupied by the Curtin University Research Institute.

The development of the site presents an opportunity for the important heritage legacy of the site to be interpreted as an integral part of the future redevelopment. The place has been recognised for its cultural heritage significance through its formal entry on the State Register of Heritage Places.

Specifically, the heritage listing relates to:

- The original 1938 administration and ward block (Victoria House) and avenue of Queensland Box trees.
- The George Bedbrook Spinal Unit (G Block) including its therapeutic courtyard garden.

## 2.0 STRUCTURE AND PURPOSE

### 2.1 PURPOSE

These Design Guidelines apply to all applications located within Area B (refer to Figure 1). The Design Guidelines will ensure that development responds to the location, context and topography of the site and enhances the amenity and character of the area. Specifically, the Design Guidelines promote high quality built form, vibrant and active centre development and high resident liveability and ecologically sustainable development, to create a memorable place.

The Design Guidelines also aim to encourage developments that are innovative in addressing climate-responsive design.

Note: All development within Area A shall be subject to the requirements of the Montario Quarter Area A Design Guidelines (published in a separate volume).



Figure 1 Applicable Design Guidelines

### 2.2 STRUCTURE AND USE

The Design Guidelines are structured in four parts to assist applicants in preparing development applications. This includes:

#### 1. Design Objectives

The design objectives outline the design intent underpinning the development controls.

#### 2. Development Controls

The Development Controls are accepted measures that ensure the design objectives are met. Applicants are required to complete a checklist to confirm the extent of compliance with the development controls (refer to Appendix B Application Checklist).

#### 3. Design guidance

The design guidance section recommends some additional measures by which a home can achieve a higher level of sustainable design, community interaction, and architectural character.

#### 4. Block diagrams

Block specific building requirements provide development parameters on a block by block basis.

### 2.3 DISCRETION (INNOVATION AND ALTERNATIVE DESIGN SOLUTIONS)

To encourage innovation, applicants are also provided the opportunity to meet the vision and objectives through alternative design and development solutions.

Alternative design solutions may be considered at the sole discretion of the Western Australian Planning Commission where it is sufficiently demonstrated that:

- The proposal will comply with the overall project objectives of the design guidelines, relevant policies and other Improvement Scheme requirements.
- There is sufficient justification and particular circumstances which necessitate a variation to the Development Controls.
- Each development application will be assessed on an individual merit basis. The acceptance of an alternative solution shall not be construed as creating a precedent for other developments.

To assist with interpretation, certain words are defined in the Appendix B – Glossary

### 2.4 PLANNING AND POLICY

The design guidelines should be read in conjunction with the following documents

#### Shenton Park Hospital Redevelopment Improvement Scheme (the Improvement Scheme)

These design guidelines have been adopted in accordance with Part 3 of the Improvement Scheme. Where the provisions of the design guidelines are in conflict with the Improvement Scheme, the provisions of the Improvement Scheme shall prevail.

All applications should also have regard for any Improvement Scheme Policy, prepared and adopted under Part 2 of the Improvement Scheme.

#### Residential Design Codes (R-Codes):

In accordance with Clause 28 of the Improvement Scheme, the R-Codes do not apply to residential development within Montario Quarter with the exception of the minimum site area requirements only.

# 3.0 APPROVAL PROCESS

There are a number of steps associated with the development of lots within Area B of Montario Quarter.

**DESIGN ENDORSEMENT:** The applicant must submit to the Estate Architect a completed Design Guidelines assessment (including completed checklist – refer section 7.0).

Once the Estate Architect has deemed the plans to meet the requirements of the Design Guidelines the plans will be endorsed, and one stamped full set returned to the applicant.



**DEVELOPMENT APPLICATION:** Plans are then submitted to the Department of Planning, Lands and Heritage for assessment and WAPC's determination. The WAPC may require changes to the plans and/or apply conditions of development approval.



**DETAILED DESIGN ENDORSEMENT:** The applicant is to submit detailed design drawings (building permit) and specifications to the Estate Architect. The Estate Architect will review plans to ensure the design intent has been maintained and that any conditions of development approval have been appropriately addressed.

Once endorsed, a stamped set of the detailed design drawings shall be returned to the applicant. Should the Estate Architect consider that the plans are not consistent with the development approval, the applicant will need to amend the plans or provide additional justification for the variation. If reassessment is required after stamped endorsement, a \$500 fee will apply to the applicant to have the drawings reassessed.



**BUILDING PERMIT:** Prior to any site works or construction commencing, the applicant must obtain a building permit from the City of Nedlands. To ensure that buildings comply with these Design Guidelines, all lots will have a caveat registered on the Certificate of Title relating to the conditions of sale. The caveat that will not be removed until the development has been completed in accordance with the development approval.

# 4.0 EXISTING CONTEXT

## 4.1 SITE CONTEXT

Montario Quarter is located approximately 5km west of the Perth Central Business District (CBD) within the suburb of Shenton Park, in the City of Nedlands local government area. The site is located in close proximity to the Shenton Park train station which is on the Perth to Fremantle passenger rail line.

The 15.8ha site is located on the edge of a precinct that includes a range of community, health and government uses. The site is contiguous to residential development to the east (located within the City of Subiaco), Alinea Inc. (formerly the Spine and Limb Association). Future residential development (to the north) non-residential uses to the west on Bedbrook Place, and Shenton College to the south.



Charles Stokes Reserve, located to the east of the site, is a linear parkland providing east-west connections into the site from the existing Cliff Sadler Reserve in Daglish. It also provides the easement for subterranean drainage and sewer infrastructure.



## 5.0 YOUR HOME

The following section provides guidance to assist in the design process to ensure that it meets the established vision and theme for Area B. The Montario Quarter Development needs to address and respond to the following general design provisions. In addition, the development must respond to the block specific building requirements (refer Section 6.0).

### 5.1 SITE PLANNING, ORIENTATION, SETBACKS AND OPEN SPACE

#### Design Objectives:

- To ensure homes are well planned to maximise liveability.
- To ensure houses are sited correctly to take advantage of the local climatic conditions.
- To ensure that the provision of setbacks creates a consistent streetscape, and built form, and ensure building co-exist with their neighbours.

#### Development Control:

- DC1 Development to comply with requirements of block diagrams (refer Section 6).

### 5.2 BUILT FORM CHARACTER

The thoughtful design of the buildings at Montario Quarter will contribute greatly to the success of the project both visually and from a sustainability perspective.

#### Design Objectives:

- To ensure that all dwellings within Montario Quarter enhance the visual and solar amenity of the development through climate responsive design.
- To provide variety, articulation and interest at street level and from the public realm.
- To achieve contemporary high quality built form outcomes.

#### Development Controls:

- DC2 Building elevations shall be articulated and provide visual interest through the composition and use of materials, colours and textures.
- DC3 Front elevations shall be articulated through the integration of projected and recessed elements such as awnings, screens and/or balconies.
- DC4 Blank façades shall not be visible from the public realm, (including streets, laneways and public open space).
- DC5 Developments on corner lots shall provide interest at the corner and address the side street boundary.
- DC6 At least one window, having a minimum size of one sq.m, shall be provided to each habitable room facing the public realm, street, and/or laneway shall be provided.
- DC7 Where contiguous to public open space, development should place communal (if applicable) and private open space with a direct visual connection to these areas.
- DC8 Balconies are to be provided to the primary frontage for all dwellings.
- DC9 All balcony balustrades shall be visually permeable to a minimum of 50 per cent of the area.
- DC10 All dwellings shall be a minimum two storeys at the primary frontage.

## 5.3 CROSSOVERS, ACCESS & VEHICLE PARKING

### Design Objectives:

- To ensure building entries are visible and easily identify the entrance to a house from the street.
- To ensure the vehicle crossover location does not detract from the safety and visual amenity of the street.

### Development Controls:

- DC11 Without exception, vehicle access shall not be permitted from a primary street or secondary street. In all circumstances vehicle access is to be provided from a tertiary street.
- DC12 Only one crossover permitted for all lots less than 2,000sq.m. A second crossover may be considered for lots 2,000sq.m or more.
- DC13 Crossovers and vehicle access ways should be constructed from a material consistent with the verge hardscaping, either as constructed or proposed.
- DC14 Asphalt crossovers are not permitted.
- DC15 Vehicle entries shall be designed to minimise visual dominance from the street.
- DC16 Car parking, service areas and bin refuse collection points shall be integrated into the development and screened from public view.
- DC17 Entrances shall be clearly defined and separate from vehicle access.
- DC18 Lots contiguous to public open space must provide direct pedestrian access from the lot to the public realm.

## 5.4 VISUAL PRIVACY, SAFETY AND SURVEILLANCE

### Design Objectives:

- Montario Quarter aims to provide opportunities for casual surveillance from homes into the public realm, whilst also ensuring privacy and security.
- Strong community relationships are fostered through the development with all new dwellings having direct visual connection with the street and/or adjoining open-space areas.
- The design, layout and architectural quality of the building edges, particularly at ground level, has the potential to contribute to the activation of the streets and public spaces.
- To design buildings to minimise adverse impacts on the privacy of adjoining dwellings

### Development Controls:

- DC19 The size and position of windows from living spaces, balcony openings, hospitality and commercial areas shall be designed to promote natural surveillance of the public realm.
- DC20 Developments are to incorporate design principles of Crime Prevention Through Environmental Design (CPTED). Developments should be designed to engage with and activate the public realm, particularly at ground level.
- DC21 Proposed access ways shall provide adequate lighting and passive surveillance to meet CPTED principles.
- DC22 Minimal direct overlooking of primary living areas, active habitable spaces and outdoor living areas of adjoining dwellings, shall be achieved through:
  - Building layout and location;
  - Design of major openings;
  - Landscape screening of outdoor active habitable spaces; and/or
  - Location of screening devices.



Surveillance: Maximise opportunities for casual surveillance from homes into the public realm whilst maintaining privacy of adjoining houses.

## 5.5 MATERIALS AND COLOURS

Informed decisions about materials can reduce the environmental impact without adding to cost. Material choice will also impact the appearance of a home and how it relates to its location and neighbouring houses. The historical context and built form at Montario Quarter should be referenced in the material and colour scheme.

### Design Objectives:

- To promote visual interest and diversity in facade treatment through the use of a variety of materials, textures and colours.
- To promote the use of materials and colours which minimise heat gains in summer.
- To promote the use of materials from renewable sources.
- To enhance the sense of place through the use of materials and colours which are unified in their appearance throughout Montario Quarter.

### Development Controls:

- DC23 Highly reflective materials for roofs/facades that could cause glare and discomfort shall be avoided.
- DC24 A variety of materials such as rendered masonry, face brick, stone, steel, glazing and contemporary cladding shall be incorporated
- DC25 Materials and colours shall respond to existing site character palettes. Additional materials and colours that complement the existing character are permitted.
- DC26 Any wall built to the zero lot line and facing a neighbourhood lot shall be finished to the same quality as the elevation to the primary frontage where it faces a neighbouring lot.
- DC27 Colour selection shall be limited to a complementary palette of two to three colours.
- DC28 Fluorescent colours are not permitted.

### Design Guidance:

- Use a lighter colour on unshaded walls that are facing east and west to reduce solar heat absorption.
- Consider using reverse-brick veneer or stud framed for east and west facing walls to avoid ambient heat build-up.
- Consider selecting primary building materials and finishing treatments that have low-embodied energy.
- Consider using reflective insulation fabric in cavity brick walls (installed to manufacturer's specifications).
- Consider selecting material based on the thermal mass and lifecycle costs.
- The use of sustainable & renewable material is encouraged.

## INDICATIVE MATERIALS AND COLOUR PALETTE



Face brickwork



Breeze blockwork



Timber shading devices



Feature tiling

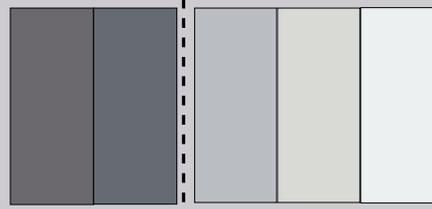


Expressed concrete



Timber shading devices

### Highlight colours



## 5.6 ROOF

The roof has the ability to contribute to the overall appearance of the home and act as a insulative barrier between the sun and the house. Roof forms that maximise solar access during the winter months and provide summer shading and weather protection to indoor and outdoor living spaces is a primary consideration.

### Design objectives:

- To allow solar access between neighbouring dwellings.
- To maximise the potential of solar access in winter.
- To minimise internal heat gains through the roof in summer.
- To minimise the visual dominance of roofs from adjacent streets, taller buildings and the greater public realm.

### Development Controls:

- DC29 Dark roof colours are not permitted.
- DC30 For single dwellings, one single roof material and colour shall be used.
- DC31 Roof ventilation to all roof spaces (not applicable to skillion roofs) is required in the form of vented gables, 'E' vent or similar appropriate alternative roof ventilators.
- DC32 Roofing materials including shading structures shall have the following:
  - For a pitched roof <15 degrees, a three-year solar reflective index (SRI) of greater than 64 is required.
  - For a pitched roof >15 degrees, a three-year SRI of greater than 34 is required.

## 5.7 OUTDOOR LIVING AREAS

The inclusion of adequately sized outdoor living areas will provide additional living spaces to residents.

### Design Objectives

- To ensure all houses include a well-designed outdoor living area with good solar access.

### Development Controls:

- DC33 One major outdoor living area shall be directly accessible from an internal living space.
- DC34 Outdoor living areas for single dwellings shall have minimum area of 24sq.m and minimum dimensions (depth or width) of 4m. Except within blocks 9A, 9B, and 9C where it is a minimum area of 20sqm with a minimum dimension (depth or width) of 3m
- DC35 Outdoor living areas for grouped dwellings shall have minimum area of 20sq.m per dwelling and minimum dimension 3.5m.
- DC36 Outdoor living areas for multiple dwellings shall have a minimum area of 10sq.m and minimum dimension (depth or width) of 2.8m.
- DC37 Outdoor living areas for multiple dwellings to be twenty per cent of site area and a minimum dimension of 5m.
- DC38 Overlooking between balconies and adjoining dwellings shall be carefully considered and privacy screening provided where necessary (except to street frontages).

## 5.8 ANCILLARY AREAS

Poorly designed ancillary buildings and associated servicing elements can detract from a well-designed house.

### Design Objective:

- To ensure that ancillary buildings, services and structures are well-integrated.
- To ensure that services have minimal visual and acoustic impact on the public realm, occupants and neighbours.

### 5.8.1 DRYING AREAS

#### Development Controls:

- DC39 An outdoor clothes drying area shall be provided and screened from public view.

### 5.8.2 SERVICES AND STORAGE AREAS

#### Development Controls:

- DC40 Where visible from a street, outbuildings and sheds shall be constructed of the same or complementary materials as the main dwelling.
- DC41 Building services, including air-conditioning units and condensers, shall not be located on balconies.
- DC42 Building services, including air-conditioning units, satellite dishes and other plant equipment shall not be visible from the street and shall be screened when located on roofs.
- DC43 Piped and wired services, including conduit shall be concealed from view on front elevations or integrated into the house design.
- DC44 Bin storage areas shall be provided and screened from public view.



Outdoor Areas: An example of an outdoor living area accessible from an internal living space.

## 5.9 GARAGES

### Design Objective:

- To ensure vehicle access and storage does not dominate the streetscape and is integrated into the built form.

### Development Controls:

- DC45 All garage doors shall have a 6m maximum width.
- DC46 Colour and material of the garage door shall match or complement the main dwelling.
- DC47 All garage doors facing the street shall be non-patterned, panel or segmented type. Roller doors are not permitted.

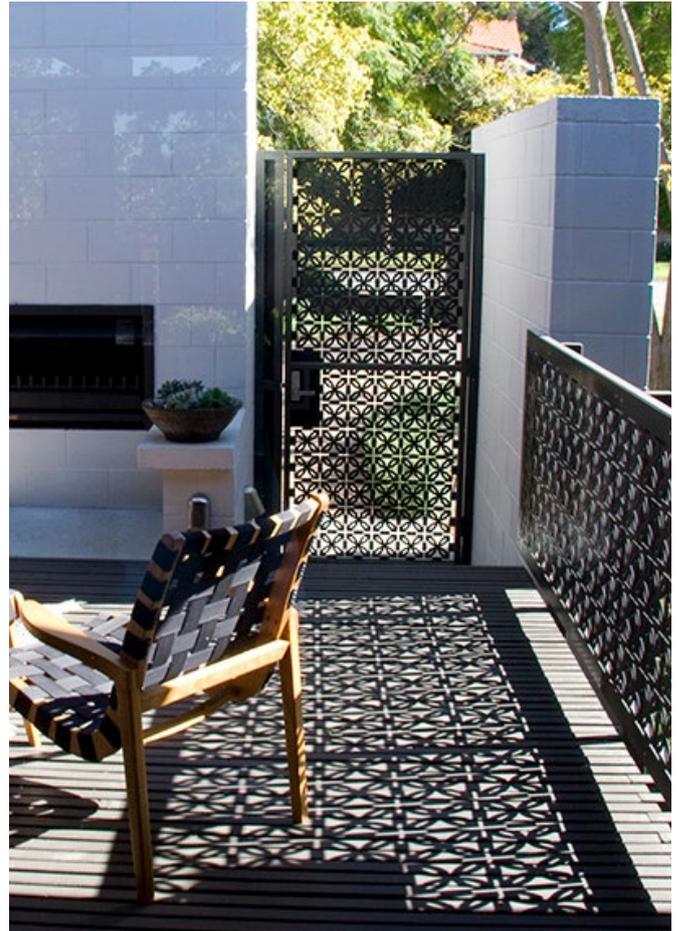
## 5.10 FENCING

### Design Objective:

- To ensure fencing contributes positively to the quality of the area, promotes air flow within the house and outdoor areas and enables surveillance of footpaths or other public areas.

### Development Controls:

- DC48 Front fencing shall be designed to complement the built form design.
- DC49 All fencing to primary frontage (including to public open space) shall be at least 50 per cent visually permeable and no more than 1.5m high from the finished floor level within the lot at the boundary.
- DC50 Colorbond and super six style fencing is not permitted. Fences should be constructed of a material to match the main building.
- DC51 Any modification to existing or new retaining walls should be constructed in the same materials and colours as existing retaining walls.
- DC52 Fencing to secondary and tertiary streets may be a maximum of 1.8m high.



Fencing: An example of fencing that contributes positively to the quality of the area, promotes air flow and enables surveillance of the street



Fencing: An example of fencing that contributes positively to the quality of the area, promotes air flow and enables surveillance of the street (Blane Brackenridge Architects)

## 5.11 THERMAL EFFICIENCY

A few simple decisions during the design phase of a project can significantly alter the thermal efficiency of your home. Floor area, wall area, construction type, and the ability to compartmentalise will affect the thermal performance of your home.

When implemented correctly, ongoing energy costs will be reduced and the comfort for occupants of the home improved.

### Design Objective:

- To provide high performance houses that minimise energy use and maximise the comfort for occupants.

### Development Controls:

- DC53 Houses shall achieve a 7-star NatHERS rating.
- DC54 Energy Rating shall be undertaken by an accredited energy assessor with NatHERS Software.
- DC55 Reflective insulation (minimum R1.5) shall be installed under roof sheeting to all outdoor living areas.

### Design Guidance:

- Consider utilising thermal mass within the insulated envelope of the building located in north-facing rooms with winter solar access.
- Consider localised heating and cooling.
- Consider insulating thermal mass included slab edges.

## 5.12 SHADING

The most effective method of shading windows is through the use of external shading devices including eaves, canopies, screens, louvres, trees and pergolas.

### Design Objective:

- To reduce cooling energy requirements of dwellings.

### Development Controls:

- DC56 Openings not shaded by eave overhangs, such as ground floor windows on a two-storey building, shall be shaded with an appropriate shading device, such as awning or louvre for example.
- DC57 Glazing to habitable rooms facing east and west shall have vertical protection, such as louvred solar-shutters, blinds or screening devices. Roller shutters are prohibited.
- DC58 West-facing outdoor living areas shall be provided with shading devices to provide sun control.

## 5.13 VENTILATION

Optimising ventilation in your home will provide opportunities for passive cooling and reduce the reliance on air conditioning during the summer months. Well-placed window openings, in combination with a narrow plan, will allow your house to 'flush' built-up heat by permitting cooling breezes to flow through your house.

### Design Objective:

- To achieve effective passive ventilation through the house.

### Development Controls:

- DC59 An operable window with a minimum one sq.m opening shall be provided for habitable rooms.

### Design Guidance:

- Consider increasing the operable area of your window for greater ventilation.
- Consider the use of operable non-glazed materials in window openings where improved ventilation and the control of solar penetration is required.
- Consider providing two external opening to each habitable room to improve cross flow ventilation.
- Louvre-type windows are encouraged to increased ventilation.
- Place smaller openings to the windward side of your home and larger openings to the downwind side for optimal breeze intake.
- When breeze-blocked areas are unavoidable, locate non-habitable rooms in these areas.

## 5.14 WATER COLLECTION

### Design Objective:

- To contain stormwater overflows and reduce flooding risks.

### Development Control:

- DC60 All 1:5 year stormwater volumes shall be contained within each lot.

## 5.15 ENVIRONMENTAL PERFORMANCE

How we design and manage our home's energy and water use can reduce running costs and ensure more sustainable energy and water use into the future.

### Design Objective:

- To provide high performance houses that minimise energy use, conserve water, reduce waste and maximise the comfort for occupants.

### 5.15.1 WATER EFFICIENCY

#### Development Controls:

- DC61 All kitchen, laundry, bath and basin tap fittings shall be minimum 4-star WELS rated.
- DC62 All shower fittings to be minimum 3-star WELS rated 7.5l/min consumption.
- DC63 All WCs to be minimum 4-star WELS rated.

### 5.15.2 ENERGY EFFICIENCY

#### Development Controls:

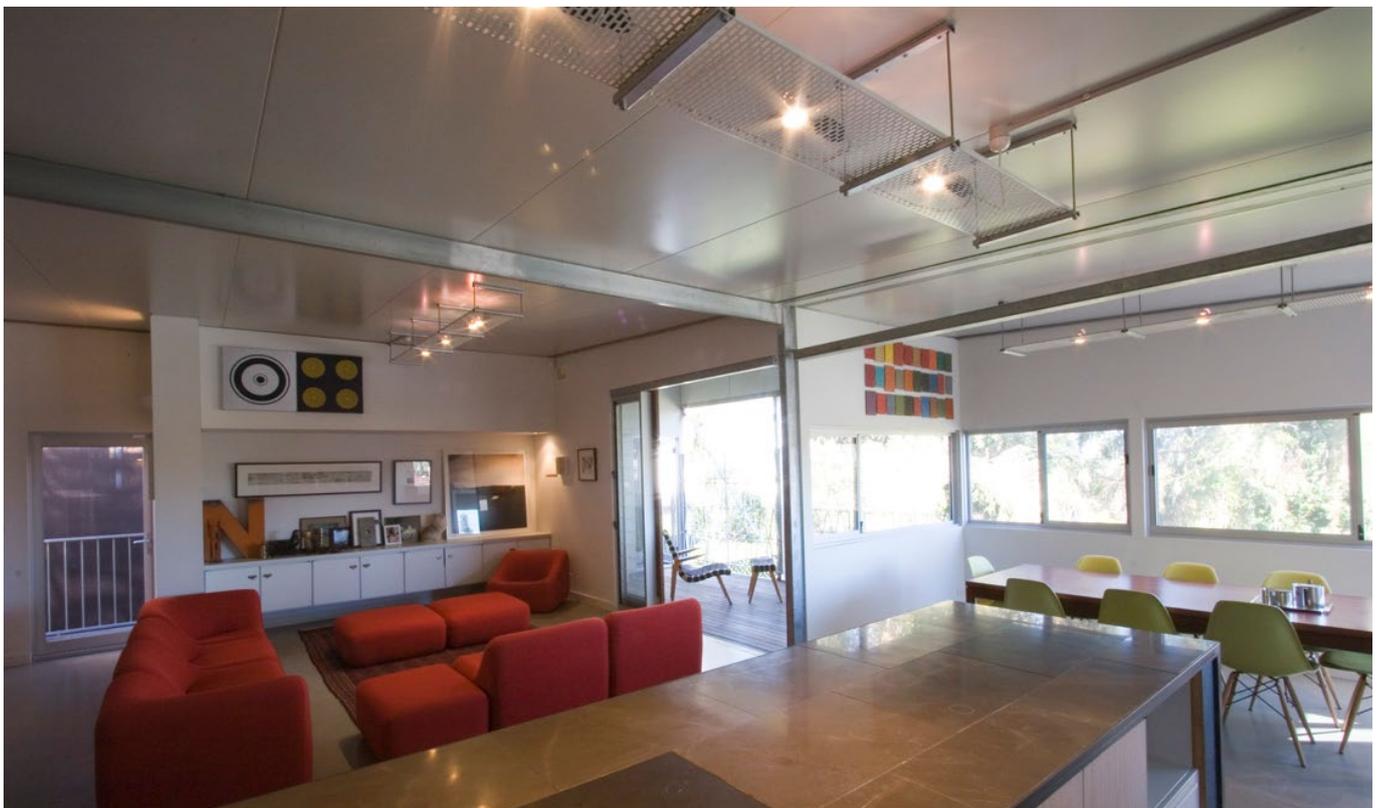
- DC64 A hot water or heat pump hot water system shall be installed. Acceptable hot water systems include:
  - Electrically powered heat pump hot water systems.
  - Electrically or gas boosted solar thermal hot water systems that are oriented within 60 degrees west and 30 degrees east of north and tilted as per the manufacturer's recommended optimal tilt. If a gas booster unit is

installed, this must be 5-star or better rated and display the appropriate label.

- Any 'PV linked' electrical hot water system that is designed to use onsite renewable energy for at least 60 per cent of electricity consumed in meeting the hot water requirements of the household. This may be through use of a 'solar diverter' to redirect excess PV production to the hot water element or may be through use of a battery energy storage system with sufficient effective storage capacity. The system must be clearly and simply demonstrated to be capable of delivering the required rated power (kilowatts) and daily energy supply (kilowatt-hours) to achieve the 60 per cent renewable energy benchmark in a short report from a competent professional.
- DC65 A photovoltaic system or alternative renewable energy system providing minimum 1.5kW per dwelling shall be installed.
- DC66 Air-conditioning systems shall be minimum 3-star energy rating and sized appropriately for the space.

#### Design Guidance:

- Position hot-water systems as close as possible to the area of most use (generally the main bathroom)
- Consider insulating all hot water pipes
- Consider the installation of a 'master switch' to enable all appliances to be turned off simultaneously or install 'stand by' power switches.



Lighting: Most new homes have multiple lights within one area and energy efficient light fixtures can dramatically reduce energy use

### 5.15.3 LIGHTING

#### Development Controls:

- DC67 Front outdoor/security lights to be operated via a timed sensor with manual over-ride.
- DC68 Rear outdoor areas adjacent to laneways to be well lit, incorporating motion activated light fittings.
- DC69 All outdoor lighting shall be directed downwards with no light spill above the horizontal plane.

#### Design Guidance:

- Consider a controlled lighting management system, for example, photosensitive cells, ultrasonic ambient/motion sensors.
- Consider installing energy efficient light fixtures such as compact fluorescent or LED lamps.
- Consider taking advantage of natural daylight when designing your house.

### 5.15.4 GREYWATER

#### Design Guidance:

- Given the prohibitive costs associated with retrofitting, the installation of greywater-ready sanitary drainage plumbing should be considered as it allows the potential for a greywater reuse unit to be installed in the future, as the cost to retrofit this drainage is cost-prohibitive. There are Residential Greywater-Ready Plumbing Guidelines available for those who may wish to obtain additional details. Further information is available at: [www.gwig.org](http://www.gwig.org)
- Consider having all toilets and washing machine cold taps be installed with dual plumbing to allow for the future connection to an alternative water source (for example rainwater), without breaking the fabric of the building.
- Provide sufficient space for future installation of a rainwater tank (minimum capacity of 3,000L) close to a rainwater down pipe/s with a minimum roof catchment area of 70 sq.m, an external power outlet, a garden tap or mains water take off point, and dual plumbing pipe work. The supply and installation of a 3,000L rainwater tank is available through the sustainability package.



Solar Design: An example of an alternate eave solution to provide effective shading for openings and glazing

## 5.16 PRIVATE OPEN SPACE

The landscape design philosophy for Montario Quarter embraces the sites history and sense of place, with a focus on ensuring community wellness and sustainable living. It is aimed at creating a cool and comfortable environment through climate-responsive solutions that combine best practice water efficiency with an attractive and diverse landscape including food production. To improve biodiversity and microclimate the planting of new trees is expected within all properties. Consideration should be given to the location and species to ensure appropriate trees are selected for their location and purpose.

### Design Objectives:

- To achieve a high-quality landscape outcome that enhances the character of Montario Quarter and contributes to a unique sense of place.
- To ensure planting is climate appropriate, water-wise and robust, whilst not having an onerous maintenance regime.
- To maximise the effectiveness of hardscape elements and minimise the negative aspects of impermeability and heat gain.
- To encourage the production of food and enhance biodiversity.
- To ensure new developments minimise the impact on existing biodiversity and habitat of the native flora and fauna.

## 5.16.1 BIODIVERSITY AND HABITATS

### Development Controls:

- DC70 Declared weed species shall be avoided in plant species selections.
- DC71 A minimum of 30 per cent local native flora shall be used (excluding riparian weeds or lawn areas) or provide an area dedicated to biodiversity.

### Design Guidance:

- Consider using a range of plants that provide habitat for small birds, frogs, lizards and predatory insects.
- Consider using plant species used by Black Cockatoo's for feeding, night roosting or nesting.
- Prioritise endemic native species where possible.

## 5.16.2 SOFTSCAPING

### Development Controls:

- DC72 Trees planted in front gardens of north facing properties shall be deciduous street trees to maintain solar passive design principles.
- DC73 Turf/lawn is to be limited to a maximum of 50 per cent of the landscaped area of the site. All turf/lawn is to be an approved waterwise variety in accordance with Water Corporation's Waterwise Gardening.
- DC74 Artificial turf is not permitted in front gardens.
- DC75 All single dwellings and group dwellings shall plant a minimum of one deep root tree within the lot (not potted).

### Design Guidance:

- Planting and positioning of buildings and infrastructure should (where possible) not block northerly and easterly sun. Plantings of shrubs on the western boundary can provide shade from the hot afternoon sun.
- Plant deciduous trees on the northern side of your property to protect your home from the summer sun whilst allowing winter sunlight to warm your home.
- Consider native groundcovers as an alternative to lawn
- Consider waterwise endemic planting in your garden
- Consider edible and fruiting plants and trees as an alternative to ornamental plants
- Consider incorporating trees within your property as an economical and effective method of cooling.
- Consider your neighbours when selecting the type and location of trees to prevent loss of solar access into their homes during winter.
- To assist in plant establishment, plant from May to August.
- Undertake soil tests prior to design to ensure the most appropriate species are selected when planting into existing soils.
- Consider trees that have a high canopy and clear mid-storey to maintain natural ventilation and air movement.

### 5.16.3 HARDSCAPING

#### Development Controls:

- DC76 Paved areas shall be planned to direct rainwater run-off onto garden areas.
- DC77 Continuous hardscape surfaces (Concrete, bitumen or brick paving, for example) shall be limited to useable spaces such as paths, BBQ areas, and shaded outdoor living areas.

#### Design Guidance:

- Use recycled and local materials in construction, avoid importing soils and other inputs.
- Select materials that reduce solar reflectance and reduce the impact of heat island effect.
- Shade external hard surface to reduce reflected heat load.
- Minimise hard surface such as paving or concrete and maximise soft landscape areas to reduce heat absorption and radiation during the summer months.
- Where hard surfaces are needed, consider permeable finishes such as gravels or permeable paving to reduce stormwater run-off.

### 5.16.4 WATER EFFICIENCY AND MAINTENANCE

#### Development Controls:

- DC78 Private water bores are not permitted.
- DC79 Any outdoor swimming pool or spa shall be supplied with a cover that reduces water evaporation and is accredited under the Smart Approved Watermark Scheme.
- DC80 Spray irrigation should be used primarily for turf areas only.
- DC81 Water efficient bubblers shall be used when irrigating trees.

#### Design Guidance:

- Maximise opportunities for water harvesting and passive irrigation while reducing run-off to the stormwater system. On sloped sites, use swales, terraces or beds that run along the contour of the slope to catch water.
- Consider establishing irrigation for the first two summers and then for extended dry-hot periods only.
- Consider adopting hydrozoning principles which involves grouping plants with similar water needs together to be more water efficient.
- Consider incorporating irrigation control technologies such as evapotranspiration sensors or soil moisture sensors to ensure efficient watering of landscaping.

### 5.16.5 ADDITIONAL RESOURCES

An excellent resource for water wise gardening tips and species lists suitable for your garden is available at:

[www.watercorporation.com.au](http://www.watercorporation.com.au)

## EXAMPLE DESIGN RESOLUTION

Figure 2 shows one way of resolving the site within the limitations of the block specific building requirements, whilst also addressing the general provisions.

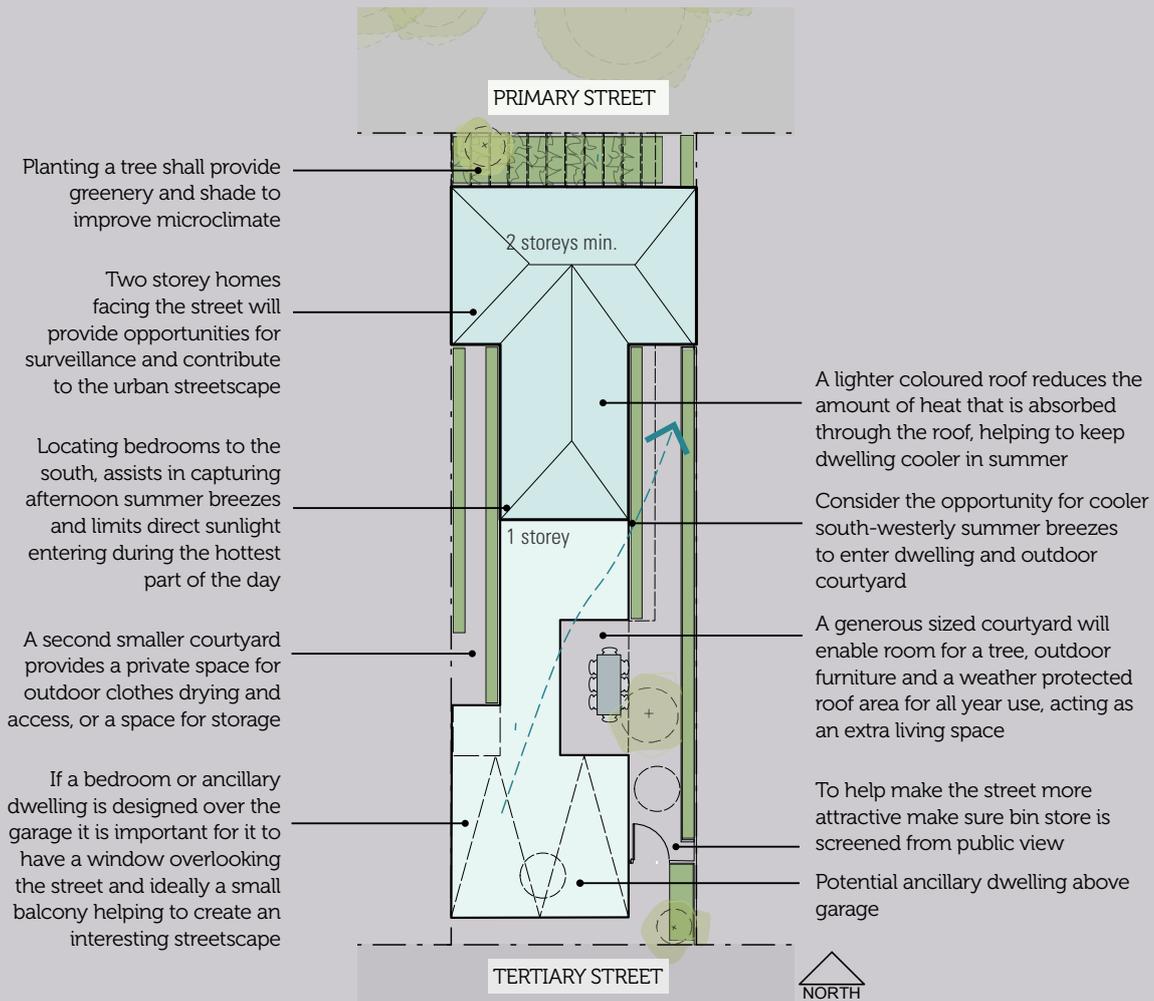


Figure 2 Design Strategies Diagram



Natural low embodied energy materials of timber and limestone



A combination of eaves and trees can provide shading to external paving and reduce the reflected heat load

# 6.0 BLOCK SPECIFIC BUILDING REQUIREMENTS

\* to be read in conjunction with relevant General provisions (refer to Section 5.0).

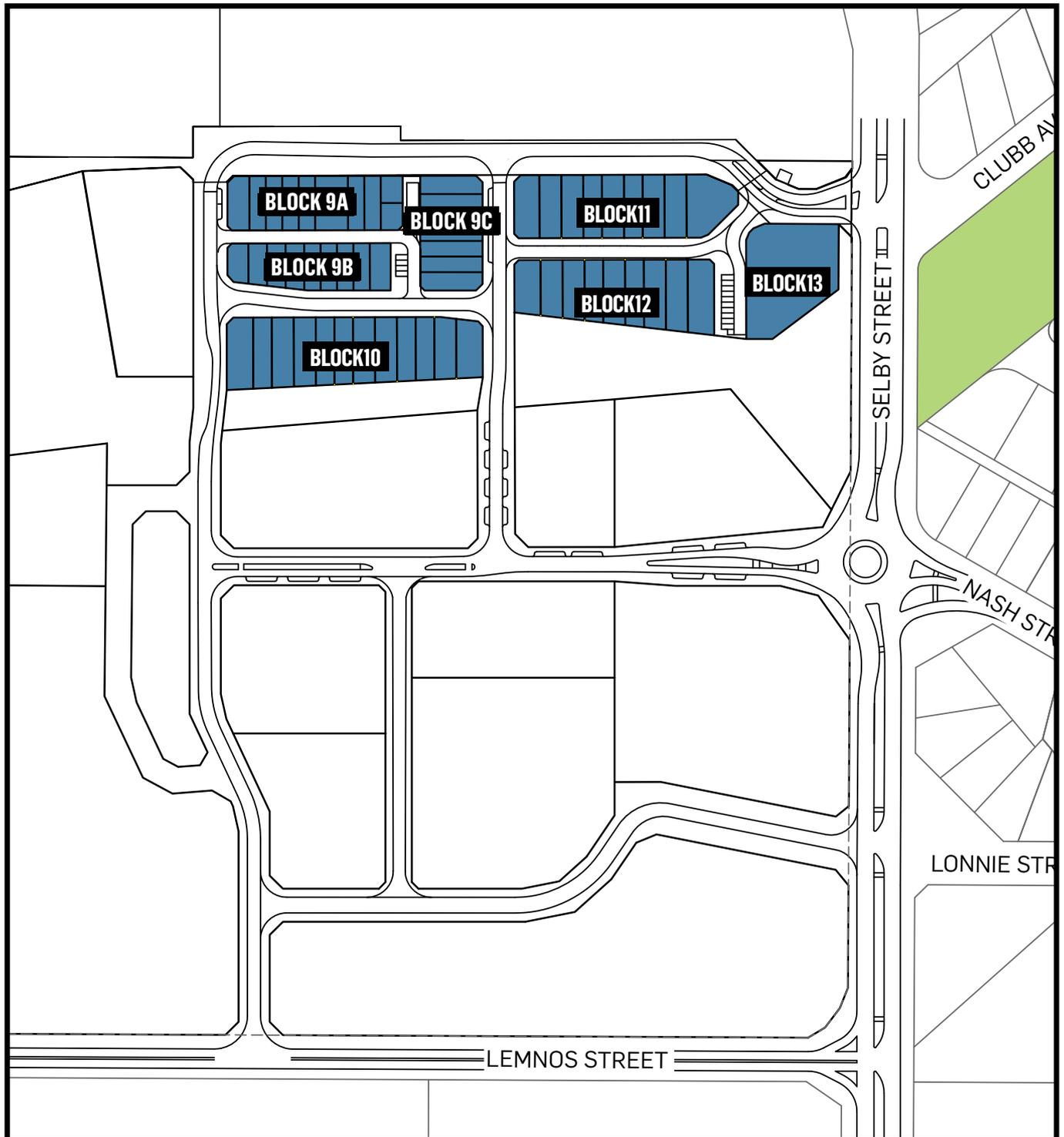


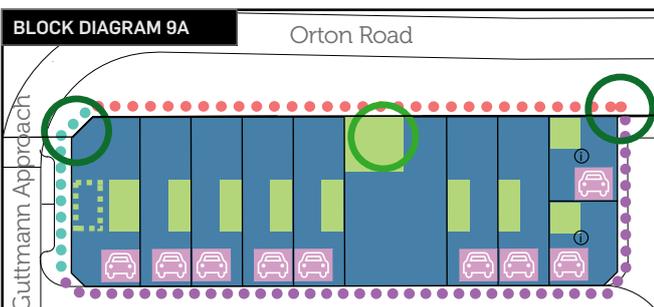
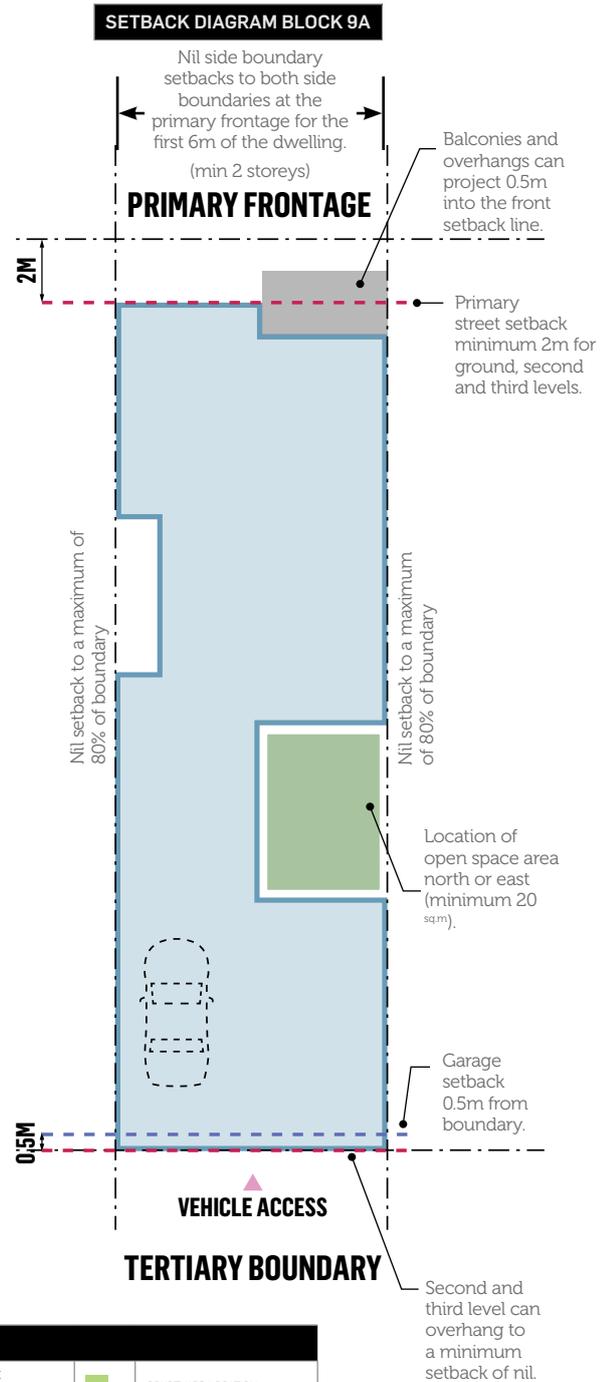
Figure 3 Area B Block Layout



## BLOCK 9A

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential																				
<b>APPLICABLE R-CODE:</b>	R60																				
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)																				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1																				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From primary frontage. Where primary frontage is not applicable, front door and letterbox shall be provided from tertiary frontage																				
<b>MIN STOREYS:</b>	2 at primary frontage																				
<b>ACCESS:</b>	Access from tertiary frontage only. No access permitted from Primary or Secondary frontage. Access must be provided in mandatory location if shown in block diagram 9A																				
<b>SETBACKS:</b>	<table border="1"> <thead> <tr> <th></th> <th>Primary</th> <th>Secondary</th> <th>Tertiary</th> <th>Side</th> </tr> </thead> <tbody> <tr> <td>Ground</td> <td>2m min</td> <td>1m min</td> <td>0.5m min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>2nd</td> <td>2m min</td> <td>1m min</td> <td>Nil min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>3rd</td> <td>2m min</td> <td>1m min</td> <td>Nil</td> <td>Nil to max 80% of boundary</td> </tr> </tbody> </table> <p>Street setback provided needs to reflect tree retention within lot and/or road reserve.</p> <p>Corner lots must address secondary frontage with suitable building articulation and materials, and provide minimum 1 habitable room window facing the street</p> <p><b>Single or Group Dwelling:</b> 20 sq.m minimum, dimension 3m min</p> <p><b>Multiple dwelling:</b> 20% of site area</p> <p><b>Special Provision Lot:</b> 16 sq.m minimum, dimension 2.4m min. Open space areas can include upper floor balconies and terraces with open roof structures</p>		Primary	Secondary	Tertiary	Side	Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary	2nd	2m min	1m min	Nil min	Nil to max 80% of boundary	3rd	2m min	1m min	Nil	Nil to max 80% of boundary
	Primary	Secondary	Tertiary	Side																	
Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary																	
2nd	2m min	1m min	Nil min	Nil to max 80% of boundary																	
3rd	2m min	1m min	Nil	Nil to max 80% of boundary																	
<b>OPEN SPACE:</b>	25% (min) of open space																				
<b>DEEP ROOT:</b>	25% (min) of open space																				
<b>TREE PROTECTION:</b>	Tree protection and mandatory tree retention measures are to be implemented where identified in block diagram 9A																				
<b>BUSHFIRE PROTECTION:</b>	Applicant to check bushfire protection requirements																				
<b>BONUS PLOT RATIO:</b>	N/A																				



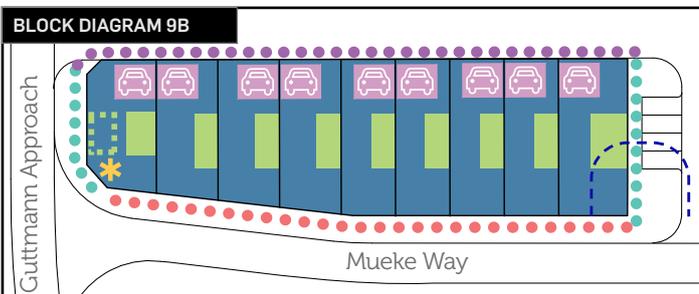
LEGEND	
	PRIMARY FRONTAGE
	SECONDARY FRONTAGE
	TERTIARY FRONTAGE
	GARAGE LOCATION
	SPECIAL PROVISION LOTS
	COURTYARD LOCATION
	ALTERNATIVE COURTYARD LOCATION
	MANDATORY TREE RETENTION
	TREE PROTECTION ZONE



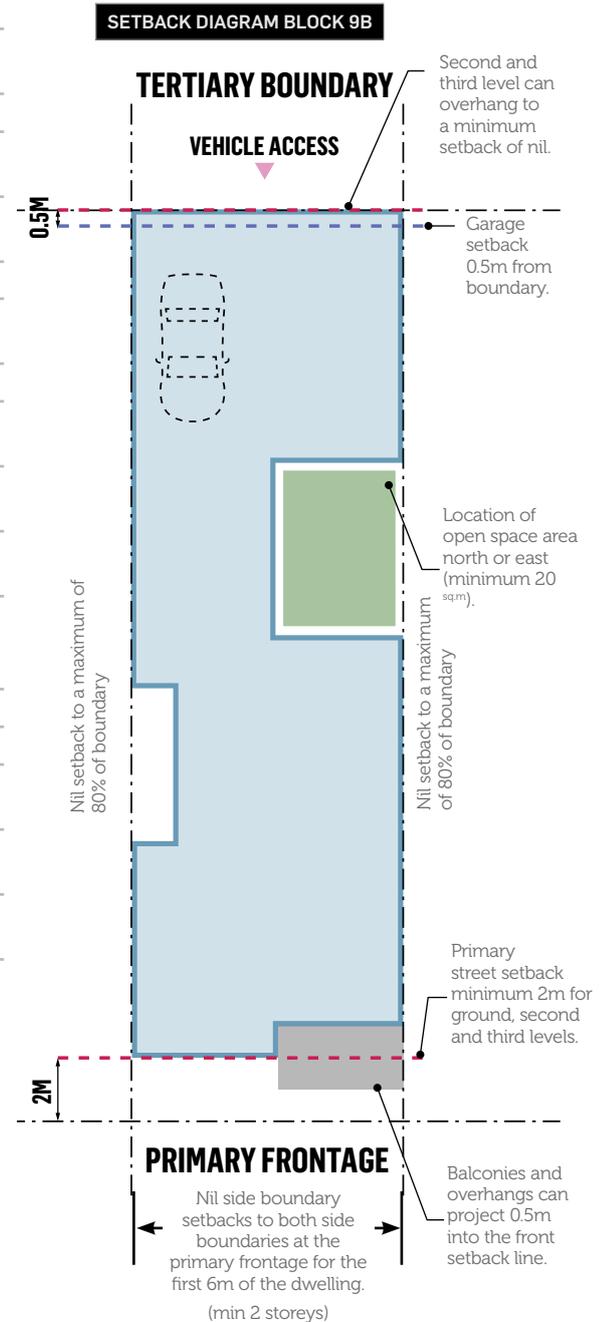
## BLOCK 9B

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential																				
<b>APPLICABLE R-CODE:</b>	R60																				
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)																				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1																				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From primary frontage																				
<b>MIN STOREYS:</b>	2 at primary frontage																				
<b>ACCESS:</b>	Access from tertiary frontage only. No access permitted from Primary or Secondary frontage.																				
<b>SETBACKS:</b>	<table border="1"> <thead> <tr> <th></th> <th>Primary</th> <th>Secondary</th> <th>Tertiary</th> <th>Side</th> </tr> </thead> <tbody> <tr> <td>Ground</td> <td>2m min</td> <td>1m min</td> <td>0.5m min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>2nd</td> <td>2m min</td> <td>1m min</td> <td>Nil min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>3rd</td> <td>2m min</td> <td>1m min</td> <td>Nil</td> <td>Nil to max 80% of boundary</td> </tr> </tbody> </table> <p>Corner lots must address secondary frontage with suitable building articulation and materials, and provide minimum 1 habitable room window facing the street</p>		Primary	Secondary	Tertiary	Side	Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary	2nd	2m min	1m min	Nil min	Nil to max 80% of boundary	3rd	2m min	1m min	Nil	Nil to max 80% of boundary
	Primary	Secondary	Tertiary	Side																	
Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary																	
2nd	2m min	1m min	Nil min	Nil to max 80% of boundary																	
3rd	2m min	1m min	Nil	Nil to max 80% of boundary																	
<b>OPEN SPACE:</b>	20 sq.m minimum, dimension 3m min																				
<b>DEEP ROOT:</b>	25% (min) of open space																				
<b>BUSHFIRE PROTECTION:</b>	Applicant to check bushfire protection requirement																				
<b>BONUS PLOT RATIO:</b>	N/A																				
<b>RESTRICTIVE COVENANT:</b>	Fire rating and noise buffer requirements may apply. Refer to contract of sale for details.																				



LEGEND			
	CORNER TREATMENT		GARAGE LOCATION
	PRIMARY FRONTAGE		RESTRICTIVE COVENANT (FIRE RATING)
	SECONDARY FRONTAGE		COURTYARD LOCATION
	TERTIARY FRONTAGE		ALTERNATIVE COURTYARD LOCATION



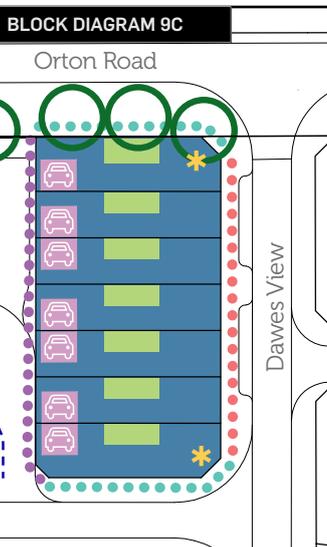
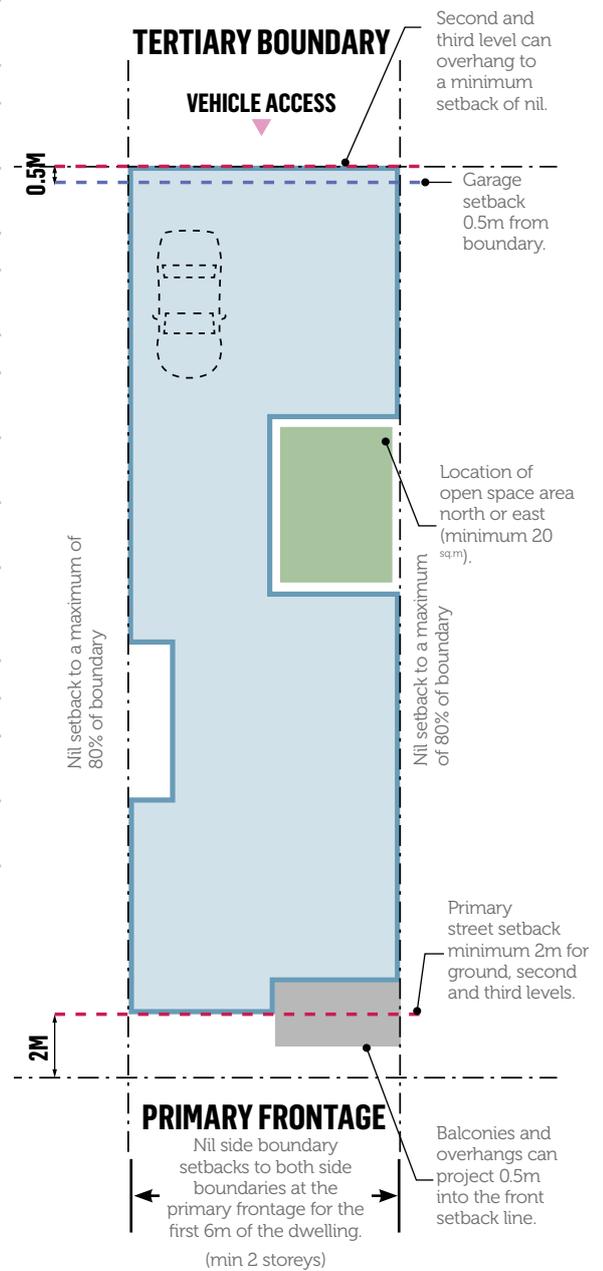


## BLOCK 9C

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential																				
<b>APPLICABLE R-CODE:</b>	R60																				
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)																				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1																				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From primary frontage																				
<b>MIN STOREYS:</b>	2 at primary frontage																				
<b>ACCESS:</b>	Access from tertiary frontage only. No access permitted from Primary or Secondary frontage.																				
<b>SETBACKS:</b>	<table border="1"> <thead> <tr> <th></th> <th>Primary</th> <th>Secondary</th> <th>Tertiary</th> <th>Side</th> </tr> </thead> <tbody> <tr> <td>Ground</td> <td>2m min</td> <td>1m min</td> <td>0.5m min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>2nd</td> <td>2m min</td> <td>1m min</td> <td>Nil min</td> <td>Nil to max 80% of boundary</td> </tr> <tr> <td>3rd</td> <td>2m min</td> <td>1m min</td> <td>Nil</td> <td>Nil to max 80% of boundary</td> </tr> </tbody> </table>		Primary	Secondary	Tertiary	Side	Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary	2nd	2m min	1m min	Nil min	Nil to max 80% of boundary	3rd	2m min	1m min	Nil	Nil to max 80% of boundary
	Primary	Secondary	Tertiary	Side																	
Ground	2m min	1m min	0.5m min	Nil to max 80% of boundary																	
2nd	2m min	1m min	Nil min	Nil to max 80% of boundary																	
3rd	2m min	1m min	Nil	Nil to max 80% of boundary																	
<b>OPEN SPACE:</b>	20 sq.m minimum, dimension 3m min																				
<b>DEEP ROOT:</b>	25% (min) of open space																				
<b>TREE PROTECTION:</b>	Tree protection measures are to be implemented where identified in block diagram 9C																				
<b>BONUS PLOT RATIO:</b>	N/A																				

SETBACK DIAGRAM BLOCK 9C



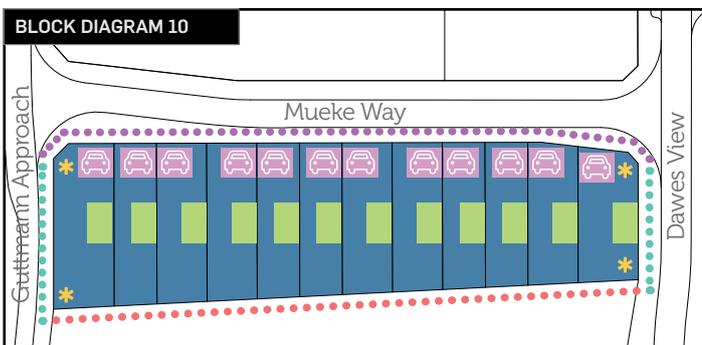
LEGEND	
	CORNER TREATMENT
	PRIMARY FRONTAGE
	SECONDARY FRONTAGE
	TERTIARY FRONTAGE
	GARAGE LOCATION
	COURTYARD LOCATION
	TREE PROTECTION ZONE



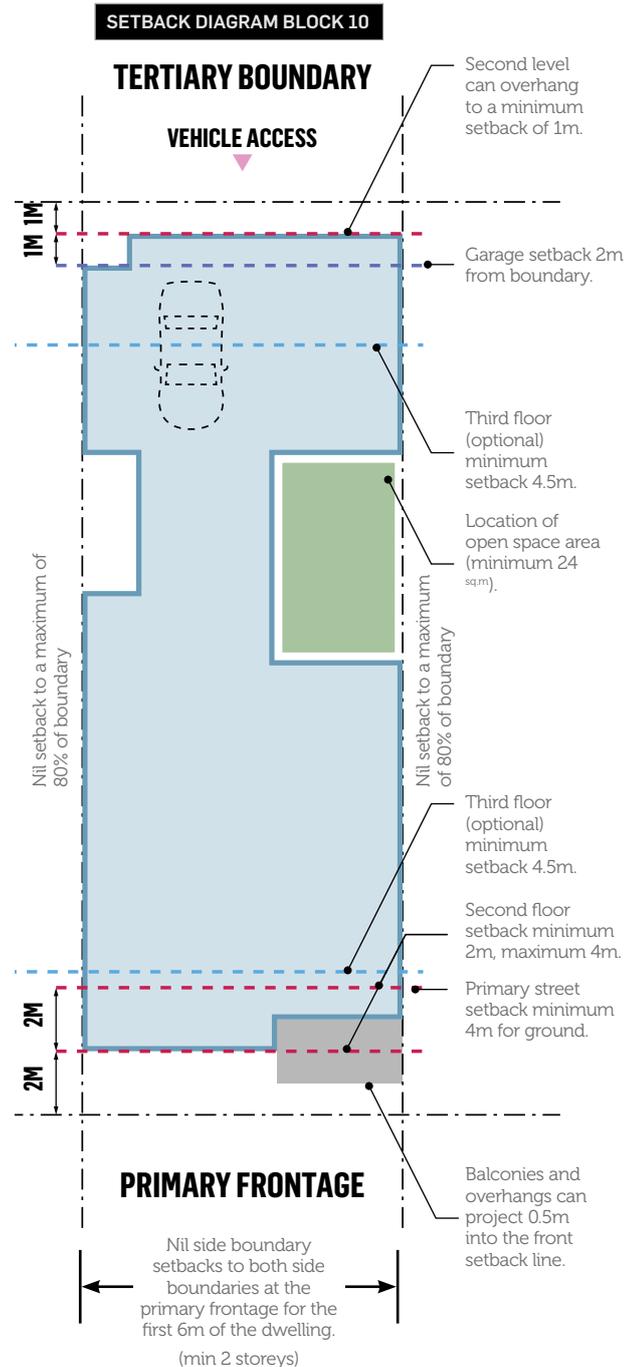
## BLOCK 10

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential				
<b>APPLICABLE: R-CODE:</b>	R60				
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From tertiary frontage				
<b>MIN STOREYS:</b>	2 at primary frontage				
<b>ACCESS:</b>	Refer Block Diagram 10				
<b>SETBACKS:</b>		<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>	<b>Side</b>
<b>Ground</b>		4m min	1m min	2m min	Nil to max 80% of boundary
<b>2nd</b>		2m min, 4m max	1m min	1m min	Nil to max 80% of boundary
<b>3rd</b>		4.5m min	1m min	4.5m min	Nil to max 80% of boundary
<b>OPEN SPACE:</b>	24 sq.m minimum, dimension 4m min				
<b>DEEP ROOT:</b>	25% (min) of open space				
<b>BONUS PLOT RATIO:</b>	N/A				



LEGEND	
	CORNER TREATMENT
	PRIMARY FRONTAGE
	SECONDARY FRONTAGE
	TERTIARY FRONTAGE
	GARAGE LOCATION
	VEHICLE ACCESS
	COURTYARD LOCATION

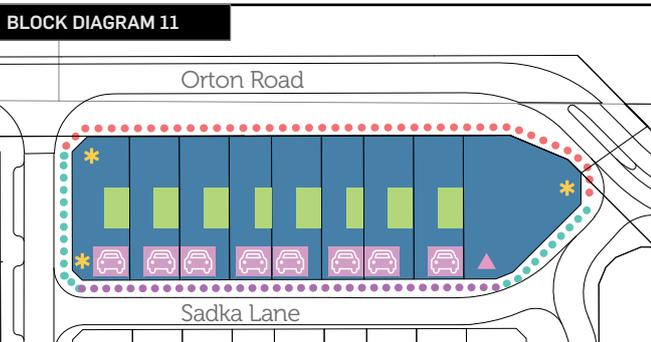




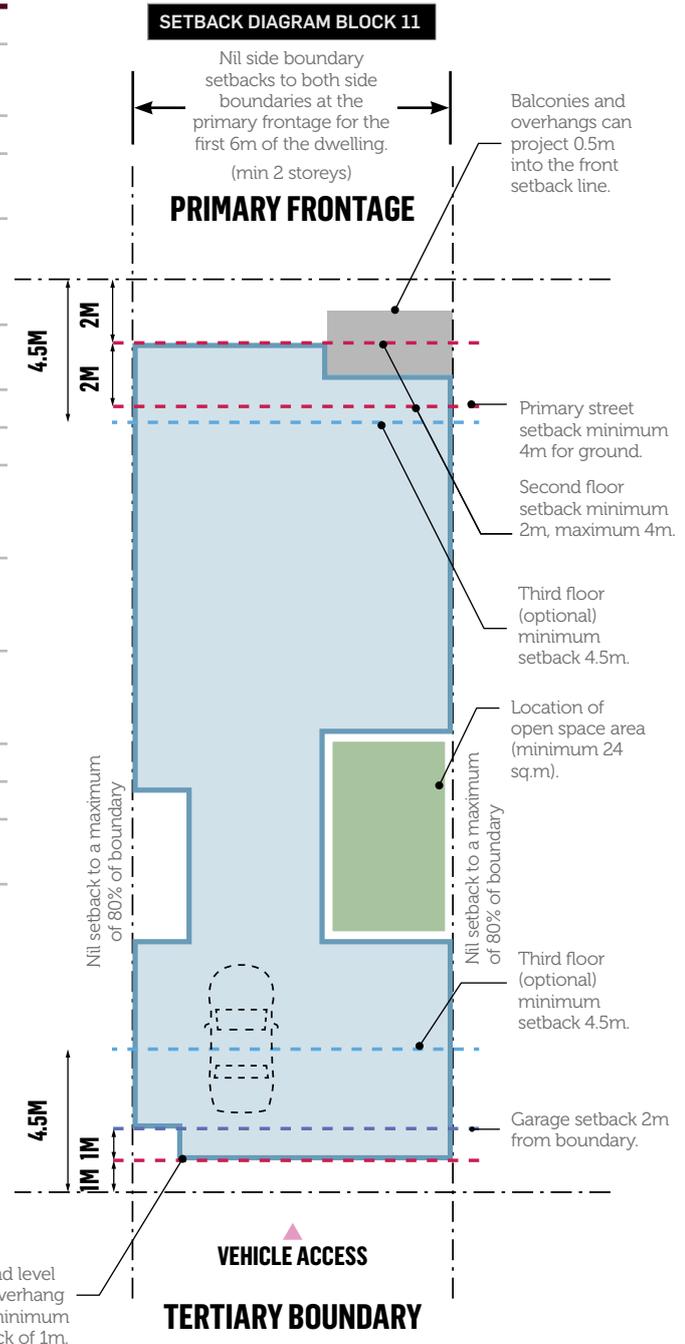
## BLOCK 11

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential				
<b>APPLICABLE:</b>	R60				
<b>R-CODE:</b>					
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From tertiary frontage				
<b>MIN STOREYS:</b>	2 at primary frontage				
<b>ACCESS:</b>	Refer Block Diagram 10				
<b>SETBACKS:</b>		<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>	<b>Side</b>
	<b>Ground</b>	4m min	1m min	2m min	Nil to max 80% of boundary
	<b>2nd</b>	2m min, 4m max	1m min	1m min	Nil to max 80% of boundary
	<b>3rd</b>	4.5m min	1m min	4.5m min	Nil to max 80% of boundary
<b>OPEN SPACE:</b>	24 sq.m minimum, dimension 4m (min)				
<b>DEEP ROOT:</b>	25% (min) of open space				
<b>BONUS PLOT RATIO:</b>	N/A				



LEGEND	
	CORNER TREATMENT
	PRIMARY FRONTAGE
	SECONDARY FRONTAGE
	TERTIARY FRONTAGE
	GARAGE LOCATION
	VEHICLE ACCESS
	COURTYARD LOCATION

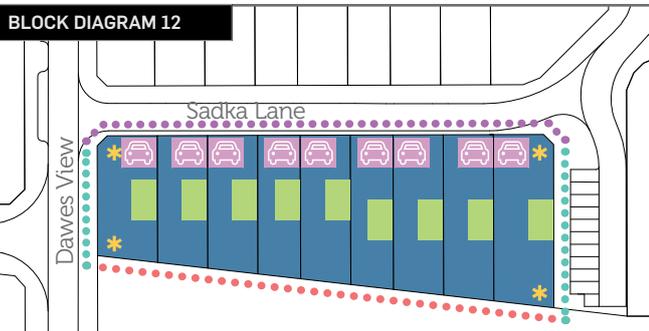




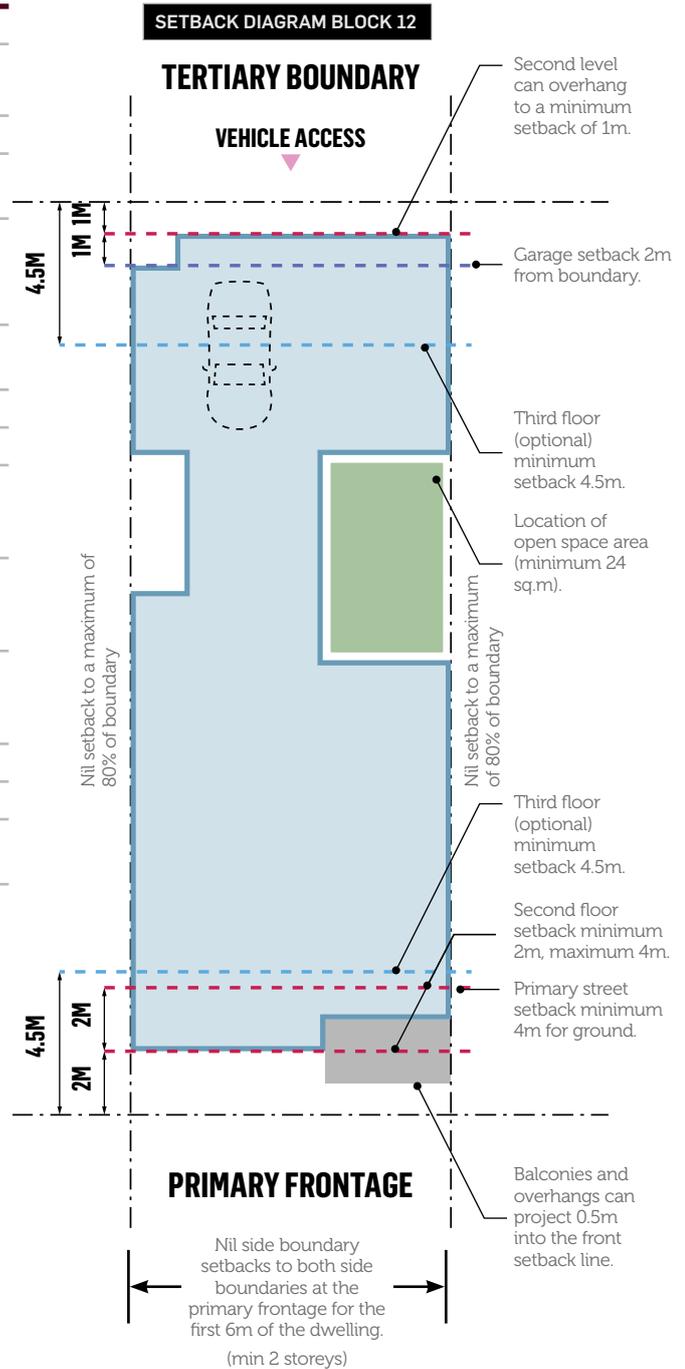
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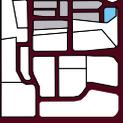
### KEY CONTROLS\*

<b>LAND USE:</b>	Residential				
<b>APPLICABLE:</b>	R60				
<b>R-CODE:</b>					
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)				
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1				
<b>FRONT DOOR &amp; LETTERBOX:</b>	From tertiary frontage				
<b>MIN STOREYS:</b>	2 at primary frontage				
<b>ACCESS:</b>	Refer Block Diagram 10				
<b>SETBACKS:</b>		<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>	<b>Side</b>
<b>Ground</b>		4m min	1m min	2m min	Nil to max 80% of boundary
<b>2nd</b>		2m min, 4m max	1m min	1m min	Nil to max 80% of boundary
<b>3rd</b>		4.5m min	1m min	4.5m min	Nil to max 80% of boundary
<b>OPEN SPACE:</b>	24 sq.m minimum, dimension 4m (min)				
<b>DEEP ROOT:</b>	25% (min) of open space				
<b>BONUS PLOT RATIO:</b>	N/A				



LEGEND	
	CORNER TREATMENT
	PRIMARY FRONTAGE
	SECONDARY FRONTAGE
	TERTIARY FRONTAGE
	GARAGE LOCATION
	VEHICLE ACCESS
	COURTYARD LOCATION

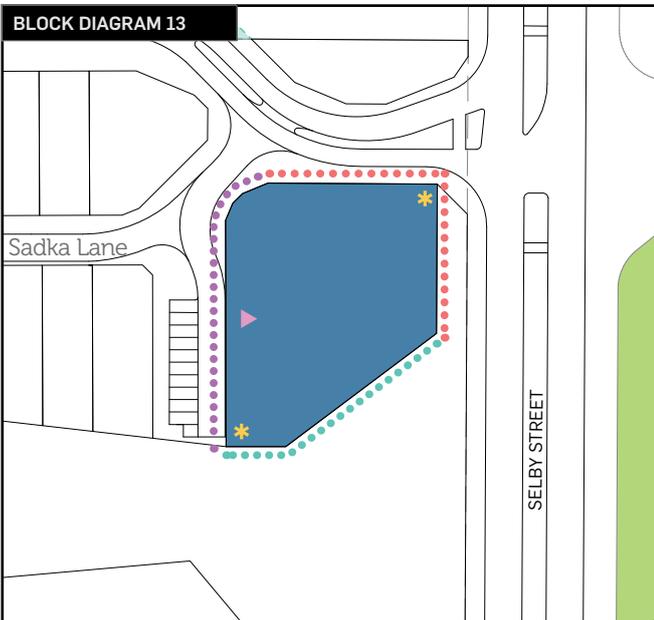




## BLOCK 13

### KEY CONTROLS\*

<b>LAND USE:</b>	Residential																
<b>APPLICABLE R-CODE:</b>	R60																
<b>PLOT RATIO:</b>	0.7 (applicable to multiple dwellings only)																
<b>PARKING:</b>	As per the Shenton Park Hospital Redevelopment Improvement Scheme No.1																
<b>SETBACKS:</b>	<table border="1"> <thead> <tr> <th></th> <th>Primary A</th> <th>Primary B</th> <th>Tertiary</th> </tr> </thead> <tbody> <tr> <td>Ground</td> <td>2.4m min</td> <td>4m min</td> <td>2m min</td> </tr> <tr> <td>2nd</td> <td>2.4m min</td> <td>4m min</td> <td>2m min</td> </tr> <tr> <td>3rd</td> <td>4.5m min</td> <td>4m min</td> <td>2m min</td> </tr> </tbody> </table>		Primary A	Primary B	Tertiary	Ground	2.4m min	4m min	2m min	2nd	2.4m min	4m min	2m min	3rd	4.5m min	4m min	2m min
	Primary A	Primary B	Tertiary														
Ground	2.4m min	4m min	2m min														
2nd	2.4m min	4m min	2m min														
3rd	4.5m min	4m min	2m min														
<b>OPEN SPACE:</b>	<p><b>Single or Group Dwelling:</b> 20 sq.m per dwelling</p> <p><b>Multiple Dwelling:</b> 20% of site area where</p>																
<b>DEEP ROOT:</b>	25% (min) of open space																



**LEGEND**

	CORNER TREATMENT
	PRIMARY FRONTAGE A
	PRIMARY FRONTAGE B
	TERTIARY FRONTAGE
	VEHICLE ACCESS

# APPENDIX A GLOSSARY

## **BLOCK SPECIFIC BUILDING REQUIREMENTS**

Development parameters that apply to each specific development site (blocks 1 to 8) that refine the general provisions (section 6 to 9) of these design guidelines by setting site specific development requirements.

## **DEEP ROOT ZONE**

Soft landscape area on a lot with no impeding building structure or feature above or below, which supports growth of medium to large canopy trees, and meets a stated minimum dimension. Used primarily for landscaping and open to the sky, deep soil areas exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas.

## **FLOOR AREA**

The gross total area of all floors of buildings on a development site, including the area of any internal and external walls but not including:

- the areas of any lift shafts
- stairs or stair landings common to two or more dwellings or tenancies
- machinery, air conditioning and equipment rooms
- space that is wholly below natural ground level
- areas used exclusively for the parking of wheeled vehicles at or below natural ground level; •
- storerooms
- lobbies, bin storage areas, passageways to bin storage areas or amenities areas common to more than one dwelling or tenancy
- balconies, eaves, verandahs, courtyards, and roof terraces

## **HABITABLE ROOMS**

As defined by the National Construction Code (NCC) a habitable room is a a room/ space used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, sitting room, television room, kitchen, dining room, sewing room, study, playroom, family room, sunroom, gymnasium, fully enclosed swimming pool or patio; but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, verandah and unenclosed swimming pool or patio and other spaces of a specialised nature occupied neither frequently nor for extended periods

## **PLOT RATIO**

The ratio of the floor area of a building to the area of land within the boundaries of the lot or lots on which that building is located.

## **PRIVATE OPEN SPACE**

Open space located at ground level or on a structure that is within private ownership and provided for the recreational use of residents of the associated apartment. It excludes car parking spaces and access ways.

## **TREE PROTECTION ZONE**

The distance from the stem set aside for the protection of a tree's crown and roots to provide for the viability and stability of the tree. This is defined by AS4970-2009, unless otherwise agreed by the decision maker on advice of an arborist.

## **TREE PROTECTION SETBACK**

The setback required to guarantee the on-going health and survival of a tree.

## APPENDIX B APPLICATION CHECKLIST

Development Control	Applicant Assessment (tick one)		Comment / Response (where development controls are not achieved)
	Achieved	Not Achieved	
<b>5.1 SITE PLANNING, ORIENTATION, SETBACKS AND OPEN SPACE</b>			
<b>DC1</b> Development to comply with requirements of block diagrams (refer section 6).			
<b>5.2 BUILT FORM CHARACTER</b>			
<b>DC2</b> Building elevations shall be articulated and provide visual interest through the composition and use of materials, colours and textures.			
<b>DC3</b> The front elevations shall be articulated through the integration of projected and recessed elements such as awnings, screens and/or balconies.			
<b>DC4</b> Blank façades shall not be visible from the public realm, (including streets, laneways and public open space).			
<b>DC5</b> Developments on corner lots shall provide interest at the corner and address the side street boundary.			
<b>DC6</b> At least one window having a minimum size of 1sq.m to each habitable room facing the public realm, street, and/or laneway shall be provided.			
<b>DC7</b> Where contiguous to public open space, development should place communal (if applicable) and private open space with a direct visual connection to these areas.			
<b>DC8</b> Balconies are to be provided to the primary frontage for all dwellings.			
<b>DC9</b> All balcony balustrades shall be			

Development Control	Applicant Assessment (tick one)		Comment / Response (where development controls are not achieved)
	Achieved	Not Achieved	
visually permeable to a minimum of 50% of the area.			
<b>DC10</b> All dwellings shall be a minimum 2 storeys at the primary frontage.			
<b>5.3 CROSSOVERS AND ACCESS &amp; VEHICLE PARKING</b>			
<b>DC11</b> Without exception, vehicle access shall not be permitted from a primary street or secondary street. In all circumstances vehicle access is to be provided from a tertiary street.			
<b>DC12</b> Only one crossover permitted for all lots less than 2,000m <sup>2</sup> . A second crossover may be considered for lots 2,000m <sup>2</sup> or more.			
<b>DC13</b> Crossovers and vehicle access ways should be constructed from a material consistent with the verge hardscaping, either as constructed or proposed.			
<b>DC14</b> Asphalt crossovers are not permitted.			
<b>DC15</b> Vehicle entries shall be designed to minimise visual dominance from the street.			
<b>DC16</b> Car parking, service areas and bin refuse collection points shall be integrated into the development and screened from public view.			
<b>DC17</b> Entrances shall be clearly defined and separate from vehicle access.			
<b>DC18</b> Lots contiguous to public open space must provide direct pedestrian access from the lot to the public realm.			

Development Control	Applicant Assessment (tick one)		Comment / Response (where development controls are not achieved)
	Achieved	Not Achieved	
<b>5.4 VISUAL PRIVACY, SAFETY AND SURVEILLANCE</b>			
<b>DC19</b> The size and position of windows from living spaces, balcony openings, hospitality and commercial areas shall be designed to promote natural surveillance of the public realm.			
<b>DC20</b> Developments are to incorporate design principles of Crime Prevention Through Environmental Design (CPTED). Developments should be designed to engage with and activate the public realm, particularly at ground level.			
<b>DC21</b> Proposed access ways shall provide adequate lighting and passive surveillance to meet the CPTED principles.			
<b>DC22</b> Minimal direct overlooking of primary living areas, active habitable spaces and outdoor living areas of adjoining dwellings, shall be achieved through: <ul style="list-style-type: none"> <li>- Building layout and location;</li> <li>- Design of major openings;</li> <li>- Landscape screening of outdoor active habitable spaces; and/or</li> <li>- Location of screening devices.</li> </ul>			
<b>5.5 MATERIALS AND COLOURS</b>			
<b>DC23</b> Highly reflective materials for roofs/facades that could cause glare and discomfort shall be avoided.			
<b>DC24</b> New development shall incorporate a variety of materials such			

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as rendered masonry, face brick, stone, steel, glazing and contemporary cladding materials.			
<b>DC25</b> Materials and colours shall respond to existing site character palettes. Additional materials and colours that complement the existing character are permitted.			
<b>DC26</b> Any wall built to the zero lot line shall be finished to the same quality as the elevation to the primary frontage where it faces a neighbouring lot.			
<b>DC27</b> Colour selection shall be limited to a complementary palette of two to three colours.			
<b>DC28</b> Fluorescent colours are not permitted.			
<b>5.6 ROOF</b>			
<b>DC29</b> Dark roof colours are not permitted.			
<b>DC30</b> For single dwellings, one single roof material and colour shall be used.			
<b>DC31</b> Roof ventilation to all roof spaces (not applicable to skillion roofs) is required in the form of vented gables, 'E' vent or similar appropriate alternative roof ventilators.			
<b>DC32</b> Roofing materials including shading structures shall have the following: <ul style="list-style-type: none"> <li>- For a pitched roof &lt;15 degrees, a three year solar reflective index (SRI) of greater than 64 is required.</li> <li>- For a pitched roof &gt;15 degrees, a three</li> </ul>			

Development Control	Applicant Assessment (tick one)		Comment / Response (where development controls are not achieved)
	Achieved	Not Achieved	
year SRI of greater than 34 is required			
<b>5.7 OUTDOOR LIVING AREAS</b>			
<b>DC33</b> One major outdoor living area shall be directly accessible from an internal living space.			
<b>DC34</b> Outdoor living areas for single dwellings shall have minimum area of 24sq.m and minimum dimensions (depth or width) of 4m. Except within block 9 where it is a minimum area of 20sqm with a minimum dimension (depth of width) of 3.0m			
<b>DC35</b> Outdoor living areas for grouped dwellings shall have minimum area of 20sq.m per dwelling and minimum dimension 3.5m.			
<b>DC36</b> Outdoor living areas for multiple dwellings shall have a minimum area of 10sq.m and minimum dimension (depth or width) of 2.8m.			
<b>DC37</b> Outdoor living areas for multiple dwellings to be 20% of site area and minimum dimension of 5m.			
<b>DC38</b> Overlooking between balconies and adjoining dwellings shall be carefully considered and privacy screening provided where necessary (except to street frontages).			
<b>5.8 ANCILLARY AREAS:</b>			
<b>5.8.1 DRYING AREAS</b>			
<b>DC39</b> An outdoor clothes drying area shall be provided and screened from public view.			

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<b>5.8.2 SERVICES AND STORAGE AREAS</b>			
<b>DC40</b> Where visible from a street, outbuildings and sheds shall be constructed of the same or complimentary materials as the main dwelling.			
<b>DC41</b> Building services, including air conditioning units and condensers, shall not be located on balconies.			
<b>DC42</b> Building services, including air conditioning units, satellite dishes and other plant equipment shall not be visible from the street and shall be screened when located on roofs.			
<b>DC43</b> Piped and wired services, including conduit shall be concealed from view on front elevations or integrated into the house design.			
<b>DC44</b> Bin storage areas shall be provided and screened from public view.			
<b>5.9 GARAGES</b>			
<b>DC45</b> All garage doors shall have maximum width of 6.0m.			
<b>DC46</b> Colour and material of the garage door shall match or complement the main dwelling. shall match or complement the main dwelling.			
<b>DC47</b> All garage doors facing the street shall be non-patterned, panel or segmented type. Roller doors are not permitted.			
<b>5.10 FENCING</b>			
<b>DC48</b> Front fencing shall be designed to			

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complement the built form design.			
<b>DC49</b> All fencing to primary frontage (including to public open space) shall be at least 50% visually permeable and no more than 1.5m high from the finished floor level within the lot at the boundary.			
<b>DC50</b> Colorbond and super six style fencing is not permitted. Fences should be constructed of a material to match the main building.			
<b>DC51</b> Any modification to existing or new retaining walls should be constructed in the same materials and colours as existing retaining walls.			
<b>DC52</b> Fencing to secondary and tertiary streets may be a maximum of 1.8m high.			
<b>5.11 THERMAL EFFICIENCY</b>			
<b>DC53</b> Houses shall achieve a 7-star NatHERS rating.			
<b>DC54</b> Energy Rating shall be undertaken by an accredited energy assessor with NatHERS Software.			
<b>DC55</b> Reflective insulation (minimum R1.5) shall be installed under roof sheeting to all outdoor living areas.			
<b>5.12 SHADING</b>			
<b>DC56</b> Openings not shaded by eave overhangs, such as ground floor windows on a 2-storey building, shall be shaded with an appropriate shading device e.g. awning or louvre.			

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<b>DC57</b> Glazing to habitable rooms facing east and west shall have vertical protection, such as louvred solar-shutters, blinds or screening devices. Roller shutters are prohibited.			
<b>DC58</b> West-facing outdoor living areas shall be provided with shading devices to provide sun control.			
<b>5.13 VENTILATION</b>			
<b>DC59</b> An operable window with a minimum 1sq.m opening shall be provided for habitable rooms.			
<b>5.14 WATER COLLECTION</b>			
<b>DC60</b> All 1:5 year stormwater volumes shall be contained within each lot.			
<b>5.15 ENVIRONMENTAL PERFORMANCE</b>			
<b>5.15.1 WATER EFFICIENCY</b>			
<b>DC61</b> All kitchen, laundry, bath and basin tap fittings shall be minimum 4-star WELS rated.			
<b>DC62</b> All shower fittings to be minimum 3 star WELS rated 7.5l/min consumption.			
<b>DC63</b> All WCs to be minimum 4 star WELS rated.			
<b>5.15.2 ENERGY EFFICIENCY</b>			
<b>DC64</b> A solar hot water or heat pump hot water system with a minimum energy rating of 5 stars shall be installed.			
<b>DC65</b> A photovoltaic system or alternative renewable energy system providing minimum 1.5kW per dwelling shall be installed.			

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<b>DC66</b> Air-conditioning systems shall be minimum 3 star energy rating and sized appropriately for the space.			
<b>5.15.3 LIGHTING</b>			
<b>DC67</b> Front outdoor/security lights to be operated via a timed sensor with manual over-ride.			
<b>DC68</b> Rear outdoor areas adjacent to laneways to be well lit, incorporating motion activated light fittings.			
<b>DC69</b> All outdoor lighting shall be directed downwards with no light spill above the horizontal plane.			
<b>5.16 PRIVATE OPEN SPACE</b>			
<b>5.16.1 BIODIVERSITY AND HABITATS</b>			
<b>DC70</b> Declared weed species shall be avoided in plant species selections.			
<b>DC71</b> A minimum of 30% local native flora shall be used (excluding riparian weeds or lawn areas) or provide an area dedicated to biodiversity.			
<b>5.16.2 SOFTSCAPING</b>			
<b>DC72</b> Trees planted in front gardens of north facing properties shall be deciduous street trees to maintain solar passive design principles.			
<b>DC73</b> Turf/lawn is to be limited to a maximum of 50% of the landscaped area of the site. All turf/lawn is to be an approved waterwise variety in accordance with Water Corporation's Waterwise Gardening.			

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<b>DC74</b> Artificial turf is not permitted in front gardens.			
<b>DC75</b> All single dwellings and group dwellings shall plant a minimum of one deep root tree within the lot (not potted).			
<b>5.16.3 HARDSCAPING</b>			
<b>DC76</b> Paved areas shall be planned to direct rainwater run-off onto garden areas.			
<b>DC77</b> Continuous hardscape surfaces (eg. Concrete, bitumen or brick paving) shall be limited to useable spaces such as paths, BBQ areas, and shaded outdoor living areas.			
<b>5.16.4 WATER EFFICIENCY &amp; MAINTENANCE</b>			
<b>DC78</b> Private water bores are not permitted.			
<b>DC79</b> Any outdoor swimming pool or spa shall be supplied with a cover that reduces water evaporation and is accredited under the Smart Approved Watermark Scheme.			
<b>DC80</b> Spray irrigation should be used primarily for turf areas only.			
<b>DC81</b> Water efficient bubblers shall be used when irrigating trees.			





