City of Perth
City Planning Scheme
No.2

Planning Policy Manual – Part 2

Planning Policies and Design Guidelines for Normalised Redevelopment Areas

Section 2.40
EAST PERTH - Area 40
Plain Street

Version #	Decision Reference	Synopsis
1	31 August 2021	Adopted

CONTENTS

1.0 INTRODUCTION

1.1 Application

These guidelines apply to land bound by Wickham Street to the north, Plain Street to the east, Wellington Street to the south and established development to the west, as identified in Figure 1. This area is within Precinct EP13: Plain Street as defined in the City of Perth Local Planning Scheme No. 26 (Normalised Redevelopment Areas)(herein called 'the Scheme').

Figure 1: Plain Street Precinct

FIGURE 1: SUBJECT SITE

Perth Girls School Lots
Single Lots
State Heritage Listing Curtilage

The Perth Girls School Design Guidelines (the Design Guidelines) are intended to guide conservation and redevelopment of the lots that make up the subject site and ensure delivery of the vision and objectives of the Scheme.

The Design Guidelines require development proposals within the subject site to deliver high quality design outcomes while respecting and celebrating the heritage significance of the Perth Girls School building. The Design Guidelines establish design objectives and acceptable outcomes for all development within the site.

The Design Guidelines have been prepared and adopted in accordance with the requirements of the Scheme. The Design Guidelines provide a flexible approach to deliver high quality developments that meet the objectives and requirements for development applications.

The Design Guidelines are set out under a series of design related headings that include the following:

Objectives
The objectives outline the intended outcome for each provision. It is mandatory to achieve the objectives. Due regard will be given to the achievement of the objectives in determining development applications or making any other discretionary decisions under the Design Guidelines and the Scheme.

Acceptable Outcomes
The Acceptable Outcomes establish specific measures and outcomes, which will assist with ensuring the specific objectives are met. However, there may be alternative solutions to demonstrate consistency with the objectives. These will be considered on a case-by-case basis.

Figures, Tables and Images
Figures, tables and diagrams – provide specific criteria that visually represents development standards. Photographs and illustrations – these are for illustrative purposes only and does not imply acceptance that the same outcome in all cases, as context may vary.

1.2 Relationship to Planning Scheme and Planning Policies

These Design Guidelines are intended to supplement the provisions of the Scheme and should be read in conjunction with the Scheme, in particular those provisions relating to the Claisebrook Project Area, Precinct EP13: Plain Street, and other Planning Policies.

The Deemed Provisions set out in the *Planning and Development (Local Planning Schemes) Regulations 2015* also form part of the Scheme Text.

The Scheme identifies Preferred, Contemplated and Prohibited uses for Precinct EP13: Plain Street and stipulates maximum plot ratio. In determining any application for development approval, the local government will have regard to these Design Guidelines, the Scheme and other Planning Policies.

1.3 Discretionary Clause

The Design Guidelines provide the opportunity for a development application to meet the Objectives through a range of design solutions. A development application may be approved where the applicant has departed from the Acceptable Outcomes where, it is demonstrated that the alternative solution(s):

a) is considered to clearly meet the relevant Objective(s) of the Design Guidelines; and
b) where a significant variation from a Primary Control is proposed, the application achieves Design Excellence and delivers additional community and environmental benefits, beyond that required by the requirements of the Design Guidelines.

Each application will be assessed on its own merits having regard to the matters above and the requirements of the Scheme

1.4 Site Context

The site is comprised of seven lots, as identified in Figure 1. Lots 774 and 775 form the Perth Girls School site which is a State listed heritage place. Lot 774 Wellington Street includes the heritage listed Perth Girls School (fmr) buildings.

East Perth Cemeteries, Pioneer Gardens and the Main Roads Western Australia headquarters are located opposite the site on the eastern side of Plain Street.

Development immediately surrounding the site, to the north, south and west, predominantly comprises of a mix of townhouses and mid-rise apartment buildings ranging from two to 12 storeys. A cluster of small-scale commercial uses is also established along the northern side of Wickham Street; whilst a large public car park identified for future high density development, sits to the south-east.

The site is located atop the second most elevated point in the city, with sweeping views possible from future development across the East Perth landscape and the Swan River. East facing development on Lot 775 will have access to views across the Cemetery, towards Matagarup Bridge and Optus Stadium. It is also surrounded by recreation spaces, with Wellington Square, Pioneer Gardens, Queens Gardens and the river foreshore within walking distance.

The site is within the Transperth Free Transit Zone, and is well serviced by the existing high frequency bus routes and Yellow CAT that operate along Wellington Street.

Figure 2: Site Context

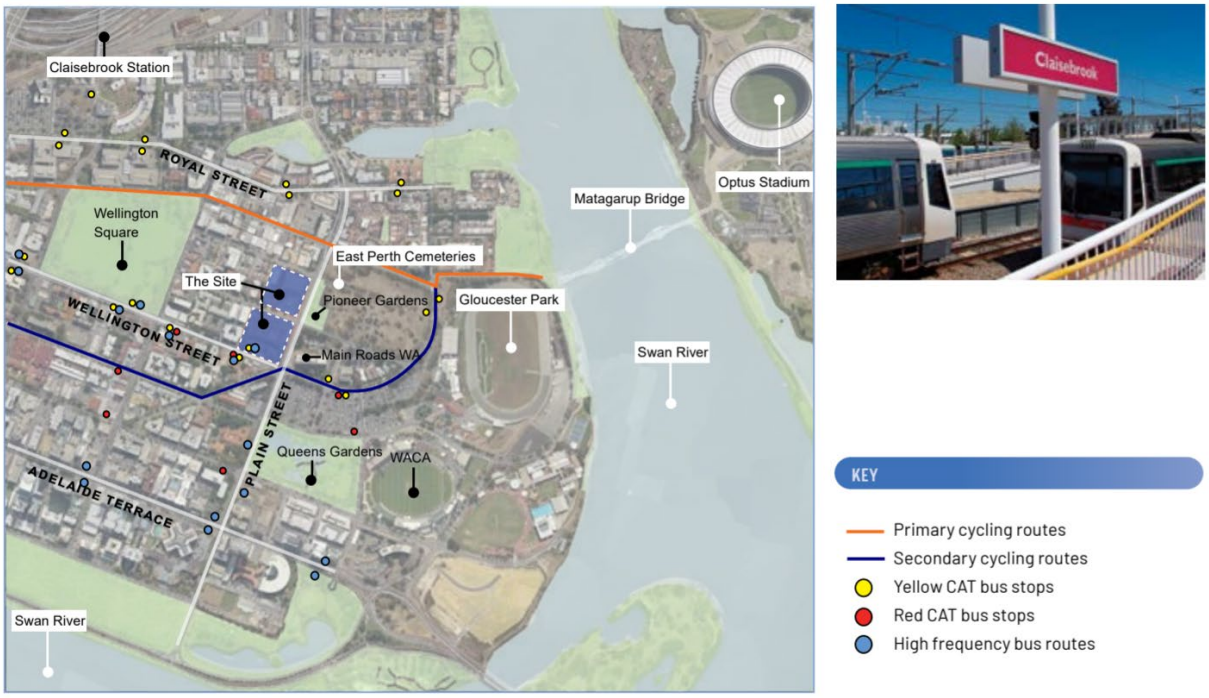


FIGURE 2: SITE CONTEXT

1.5 History

Prior to European settlement the subject site and surrounds were occupied by the Whadjuk Noongar people. The hill top on which the Perth Girls School precinct is located is of particular historic cultural significance to the Whadjuk Noongar people, as a high point where ceremonies marking the transition from boy to manhood were held.

During the early years of European settlement, the site formed part of the East Perth Cemeteries, with Presbyterian and Chinese burial grounds historically located on Lot 775. When the cemetery was closed in 1899, families of the deceased were given the option to transfer remains to Karrakatta Cemetery. Some remains were left and the playing fields and some outbuildings were subsequently constructed on the land. A separate exhumation project is underway prior to redevelopment of the site.

The site is now named in reference to the former Perth Girls School, and its associated playing fields, which were constructed over Lots 774 and 775 in 1936. The Perth Girls School operated at the site until 1962.

From 1963 onwards the subject site was used as an office and vehicle licensing inspection centre by the Western Australian Police. Despite the change in land use, the school building and grounds have undergone little change since completion of their original construction, with the exception of superficial modifications to meet the modern requirements of a state government department.

1.6 Heritage Listing

The Perth Girls School site is listed on the State Register of Heritage Places in accordance with the provisions of the Heritage Act 2018 (the Heritage Act). The adjacent East Perth Cemeteries is also listed on the State Register of Heritage Places and is classified by the National Trust of Australia (WA).

The Perth Girls School building is recognised for its aesthetic significance as a particularly fine example of the use of the inter-war stripped classical style. The design excellence and architectural merit of the building was recognised by a Royal Institute of British Architects award in 1939.

The building remains a prominent landmark in the area. It is of particular note as it is of a scale and prominence more often associated with large government departments than with an educational building. The building also demonstrates a particular phase in the philosophy of female education, and represented the cutting edge of education practice in the 1930s.

In accordance with the Heritage Act, all development applications for the site are required to be referred to the Heritage Council of Western Australia (HCWA) for consideration, with development approval that is inconsistent with HCWA advice unable to be granted.

1.7 Vision

The subject site presents a large scale revitalisation opportunity at the centre of East Perth, with an iconic hill-top presence and distinctive heritage character. It is envisaged that new development will:

- Recognise, celebrate and build upon the site's Aboriginal and European cultural heritage significance and the area's history to facilitate authentic redevelopment which amplifies the local sense of place.
- Capitalise upon the hill-top position and respond to the natural topography of the site by stepping development to follow the terrain and capture views across the city and Swan River.
- Showcase best practice urban design, adaptive heritage re-use and sustainability initiatives, to develop a distinctive and vibrant local hub.
- Support sustainable development, by providing the opportunity for people to live close to employment, their daily needs, social facilities and leisure activities, reducing private car use and travel time and promoting alternative modes of transportation to and from the site, whilst supporting local business and community development.
- Leverage the site's unique attributes to attract a mix of land uses to enhance the offerings in the local area, bringing more people, activity and diversity to the neighbourhood of East Perth.
- Increase the East Perth population through attractive, quality design and amenities, as well as through a diverse range of affordable permanent housing options to encourage a multigenerational local community.

Key elements of the vision include:

- The Perth Girls School building is retained and celebrated at the heart of the precinct, through adaptive reuse and activation, with a culture and creative industry focus and the lower levels of the buildings open to the public.
- New additions are positioned and scaled to respect the significance of the Perth Girls School building and maintain views to the heritage facade from the street edges.
- Tallest building forms are located at the high point of the hill and away from lower residential buildings on surrounding sites.
- The landmark status of the site is acknowledged through innovative and iconic building design that responds to the existing heritage character and context.
- Human scale modulation of built form is achieved along the street edges, responding to the proportions of the heritage building modules as well as the local urban grain.
- Activation is focused within and around the Perth Girls School building, as well as the street edges of Wellington and Bronte Streets.
- Opportunity for a single level retail and dining offering on Wellington Street, cut into existing ground levels to minimise visual interruption to the heritage facade.
- High quality, landscaped public spaces are provided that align with pedestrian desire lines and respond to micro-climate conditions.
- Mature trees are retained / incorporated into the landscape design to add amenity, reduce the urban heat island effect and maintain established tree corridors.
- Plain Street is developed as a tree lined boulevard with a green edge that visually links to the East Perth Cemeteries green space.
- Parking is concealed from view in underground basements, with vehicle access points consolidated on Wellington Street, Bronte Street and Wickham Street.
- The development interface along both sides of Bronte Street is designed to prioritise safe pedestrian movement and encourage traffic calming.
- Development is designed and configured to encourage and support the use of active travel modes, including cycling.

Figure 3: Vision Elements

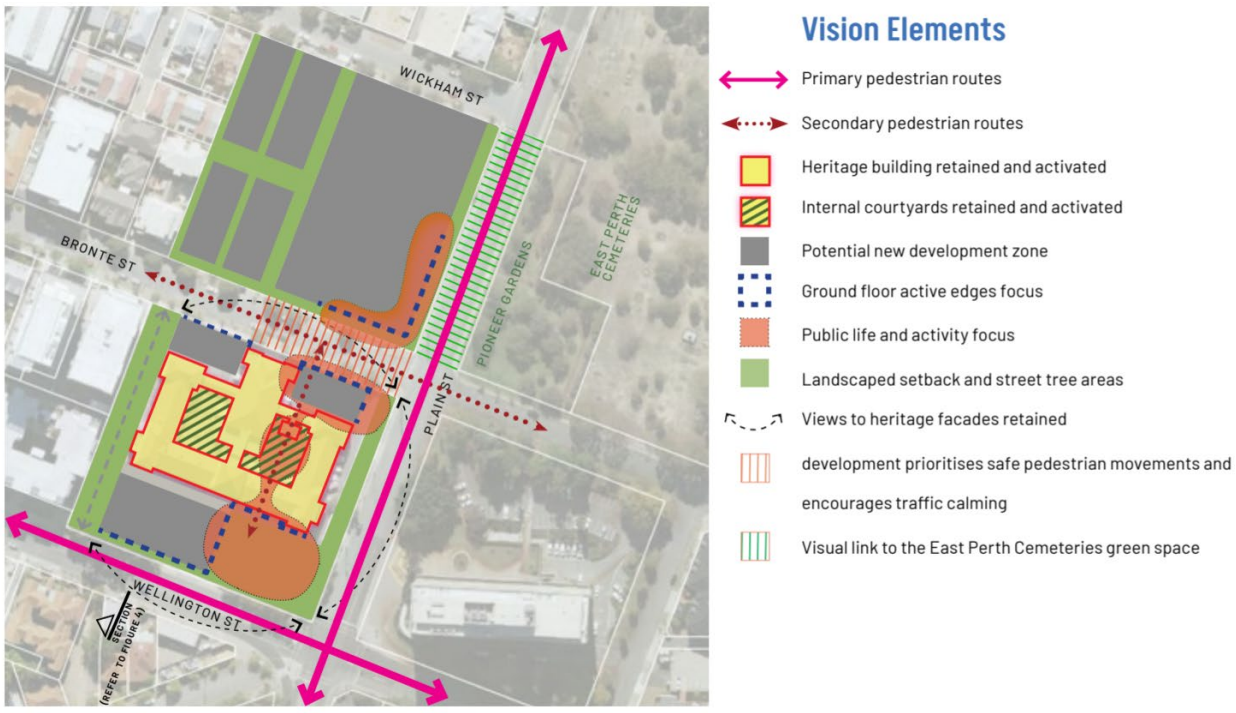


FIGURE 3: VISION ELEMENTS

Figure 4: Indicative section of vision through the Southern Perth Girls School Site

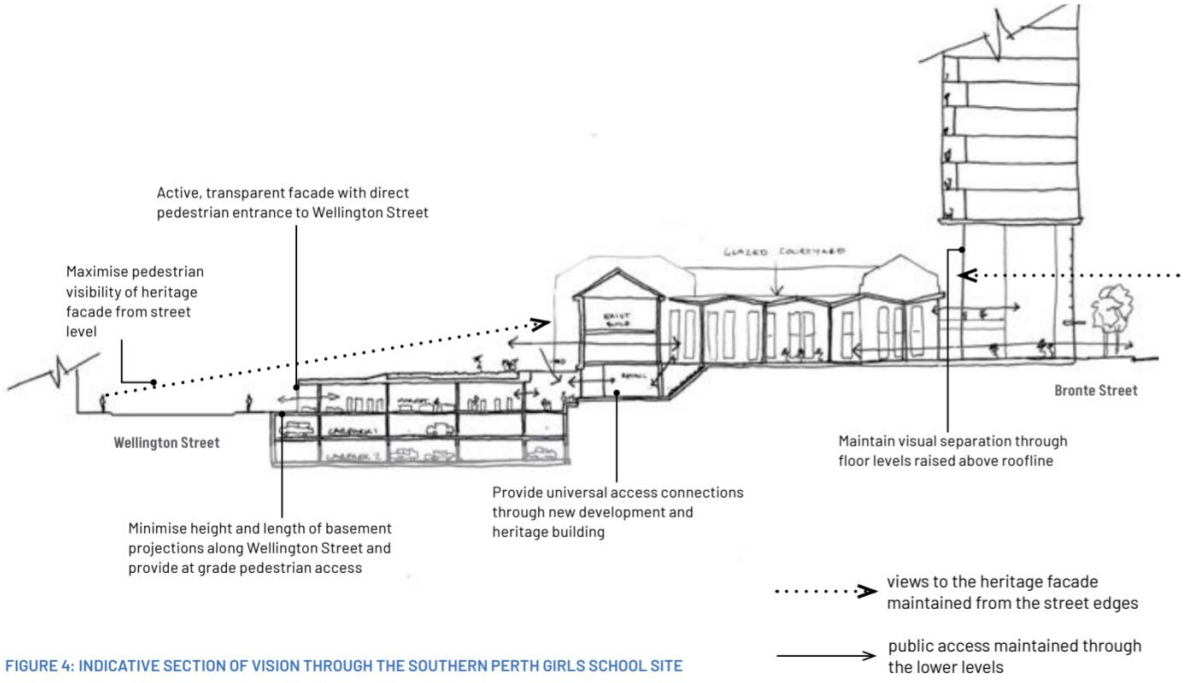


FIGURE 4: INDICATIVE SECTION OF VISION THROUGH THE SOUTHERN PERTH GIRLS SCHOOL SITE

2.0 DESIGN QUALITY, CHARACTER AND HERITAGE

2.1 Design Quality

Design excellence means achieving an exceptional outcome by addressing all principles of good design and going above and beyond these. Recognition of design excellence is not done by checklist but through a process of evaluation and an advisory design review process with input from experienced independent professionals.

State Planning Policy 7.0: Design of the Built Environment sets out the following Design Principles to guide design, review and decision making to deliver good design outcomes:

- Context and character - good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.
- Landscape quality - good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.
- Built form and scale - good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.
- Functionality and build quality - good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.
- Sustainability - good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.
- Amenity - good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.
- Legibility - good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.

- Safety - good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.
- Community - good design responds to local community needs as well as the wider social context, providing buildings and spaces that support a diverse range of people and facilitate social interaction.
- Aesthetics - good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.

Objectives

- New developments will actively pursue achievement of Design Excellence to create highly valued and responsive environments that meet the needs of users, support the community and strengthen sense of place.

Acceptable Outcomes

- Built form, open space and public realm designs satisfy the above principles of good design and meet all objectives of the Design Guidelines relevant to design quality and amenity.
- High quality and cohesive palettes of materials and finishes are incorporated into the built form and landscape design.
- All buildings are designed by Registered Architects, with ongoing involvement of the architect, from design to completion of construction, to ensure design quality is maintained from development application stage to construction stage.
- Design Excellence is demonstrated for proposals that exceed the Primary Controls.

2.2 Character and Heritage

The Aboriginal and European historical cultural significance of the site and setting should be recognised and celebrated to facilitate authentic redevelopment which amplifies the local sense of place (refer sections 1.8 History and 1.9 Heritage Listing).

Built Form Heritage

The Perth Girls School is a landmark building, located in a culturally significant setting next to East Perth Cemeteries. It is recognised historically for its architectural merit and contribution to the education of young women in Western Australia.

The building retains a high level of authenticity. The building was recognised for its creative design and innovative excellence for the "E" shaped plan, the special provision of science and domestic wings, the Model Cottage, assembly hall, and new radio, clock, and mechanical ventilation systems, high natural light levels, and built in equipment.

The Model Cottage is a small cottage attached to the school building, located within the eastern courtyard. It is the only known surviving example of a purpose-built domestic education cottage in the State.

Objectives

- The Perth Girls School building, including the Model Cottage, will be retained and adaptively reused with minimal external and internal alterations.
- New development will be designed and located to demonstrate a respectful response to the architectural language and symmetry of the existing Perth Girls School building, maintain views to the heritage facade from the street edges, and achieve best practice heritage conservation and adaptive reuse, consistent with the requirements of the Heritage Council of Western Australia.

- The broader history of the site, including Noongar history, East Perth Cemeteries and historic landscape and native vegetation and School and Police history will be integrated within new development through meaningful and well-designed integrated interpretation.

Acceptable Outcomes

- Development showcases the heritage significance of the Perth Girls School building, including important aspects of its curtilage, through activation and public access, with minimal intervention.
- New development and landscape designs respect and complement the historic Perth Girls School building by referencing and interpreting the symmetry, scale, rhythm and materiality of the building.
- The existing ground levels around the heritage buildings, other than to the south west frontage, are preserved to avoid damp and structural issues.
- The scale, positioning and layout of new development addresses issues of interface and impact with the heritage building, including, but not limited to structural and aesthetic integrity, access for maintenance and cleaning of the heritage facade, and the physical interventions required for accessibility.
- A two metre separation is provided between the proposed northern towers and the heritage building, with the exception of a lightweight structure linking the tower and the heritage building and a small amount of cantilevering at a high level.
- New development at the south west corner of the southern site is cut into existing ground levels, with a maximum overall height below the existing Finished Floor Level (FFL) of the main entry to the heritage building (Approx. 24m AHD), and configured to minimise any visual interruption to the heritage facade.
- The lower levels (first 14m) of any new development to the north of the Perth Girls School building are to be designed to maximise visual permeability through to the heritage facade, with walls and other obstructions minimised.
- New development is setback from Plain Street to maintain view lines to the Perth Girls School building, as well as to create an enhanced pedestrian environment along Plain Street opposite East Perth Cemeteries.
- The design of new development considers the micro-climate of the heritage courtyards, so that they are attractive and comfortable to ensure design appeal and success.
- The Model Cottage is meaningfully integrated into any proposed development of the site.
- New services and service areas are located where they do not impact on significant spaces or original heritage fabric.
- The original plan and spatial structure (i.e. circulation, relationship between spaces and volume) can be read within the adapted building.
- All works to the Perth Girls School sites are undertaken in accordance with the Perth Girls School Conservation Plan prepared by Palassis Architects in May 1997 and the Update to The Conservation Plan prepared by Palassis Architects in June 2015 (the Conservation Plan documents), or as otherwise amended.
- Heritage interpretation elements are incorporated into the design of new development, recognising the historic themes and aspects of aesthetic, historic, scientific and social significance identified in the Register of Heritage Places Assessment documentation and Conservation Plan documents.
- New development, particularly on the northern site, is designed to respect and respond to the cultural significance of the adjacent East Perth Cemetery and the site's history as a former part of this cemetery is acknowledged through heritage interpretation.
- A Heritage Impact Statement is required to be submitted as part of any development application for the Perth Girls School sites.

3.0 BUILDING DESIGN

3.1 Primary Controls – Perth Girls School Site (Lots 112, 774 and 775)

The below Primary Controls Table, Table 1, provides the primary development standards for development on the northern and southern Perth Girls School sites, which comprise of Lots 775 and 112 Bronte Street and Lot 774 Wellington Street.

Table 1: Primary Controls Table

		Northern Site - Lots 112 and 775	Southern Site - Lot 774
Plot Ratio (Maximum)		7:1	2.5:1
Setbacks (Minimum)	**Podium Street Setbacks:**	Plain Street: 3m Bronte Street: 3m Wickham Street: Nil	Wellington Street: 3m
	Heritage Setback (from existing wall of heritage building)	N/A	Wellington Street forecourt building: 4m Bronte Street Towers: 2m
	Tower Street Setbacks:	5m from podium frontage or 8m tower to ground	Plain Street: 8m Bronte Street: Nil
	Western Side Boundary Setback:	Podium or tower: 6m	Tower: 8m Single storey building: 8m
Building Height Limit	**Podium (Maximum)**	4 storeys up to 14m	N/A
	Total	15 storeys on western side	Bronte Street: 25 storeys Wellington Street: single storey*
Percentage Site Coverage (Maximum)		85%	55%
Basement Floor Plate Limitations		consolidated below building footprint	Heritage limitations and deep root zone
Tower Floor Plate (Maximum)		50% of the tower envelope zone	35m x 17m
Tower Separation (Minimum)		15-20m	20m*

* Additional heritage, height and setback limitations may apply, in accordance with section 2.2 'Character and Heritage' and HCWA advice.

Figure 5: Primary Controls for Perth Girls School Sites

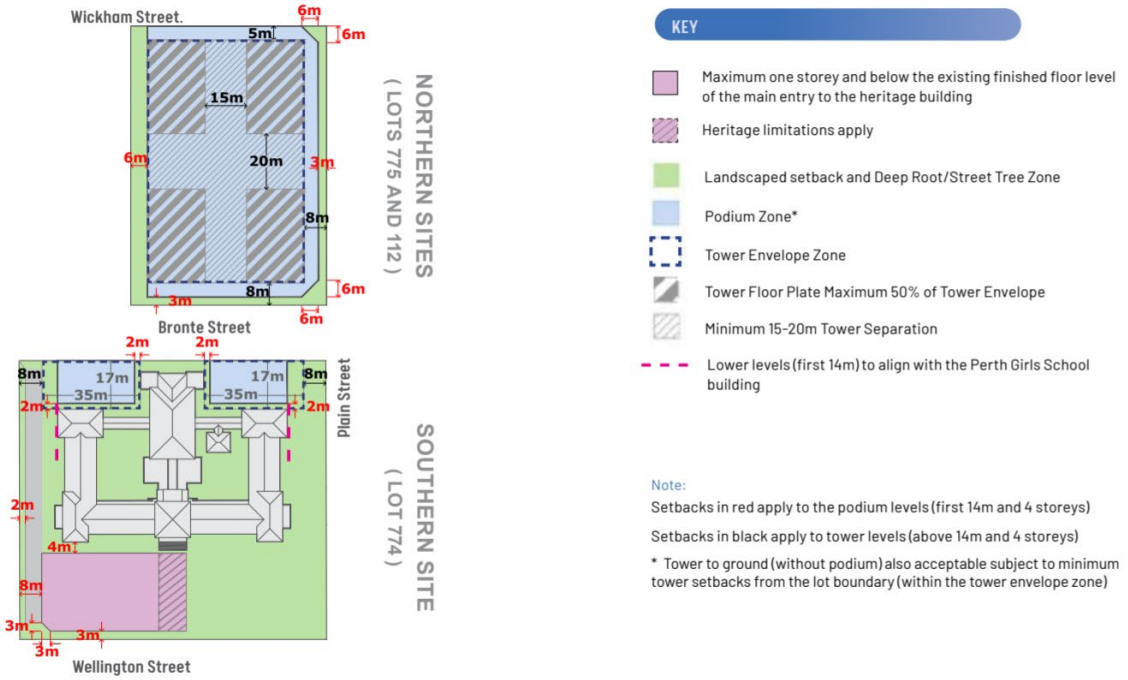


FIGURE 5: PRIMARY CONTROLS FOR PERTH GIRLS SCHOOL SITES

3.2 Primary Controls – Single Lots (Lots 67, 68, 110 and 111)

The below Primary Controls Table, Table 2, provides the primary development standards for all development on Lots 67, 68, 110 and 111. Should the lots be amalgamated, the 'Amalgamated' controls will apply.

Table 2: Primary Controls Table – Single Lots

		Individual	Amalgamated
Plot Ratio (Maximum)		4:1	5:1
Setbacks (Minimum)	**Podium Street Setback**	Bronte St: 3m Wickham St: Nil	
	Tower Street Setback	8m (5m from podium)	
	Sides Setback	3m*	Podium: 3m* Tower: 6m
	Rear Setback	Podium: 6m Tower: 10m	
Building Height Limit	**Podium (Maximum)**	4 storeys (up to 14m)	
	Overall	10 storeys	15 storeys
Percentage Site Coverage (Maximum)		80%	
Basement Floor Plate Limitations		Deep root zone	
Tower Floor Plate (Maximum)		-	30m x 25m

*to walls with no major openings (increased setbacks may apply under section 3.16 'Visual Privacy')

Figure 6: Primary Controls for Single Lots

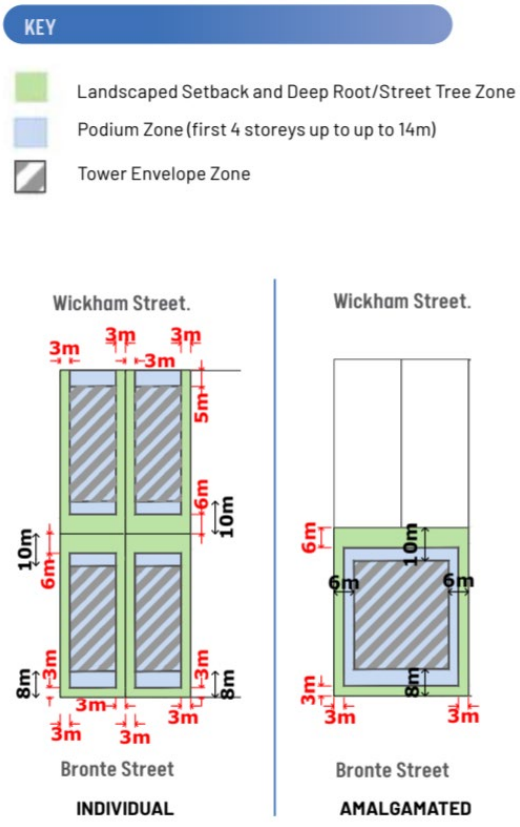


FIGURE 6: PRIMARY CONTROLS FOR SINGLE LOTS

Figure 7: Maximum Height Distribution Diagram

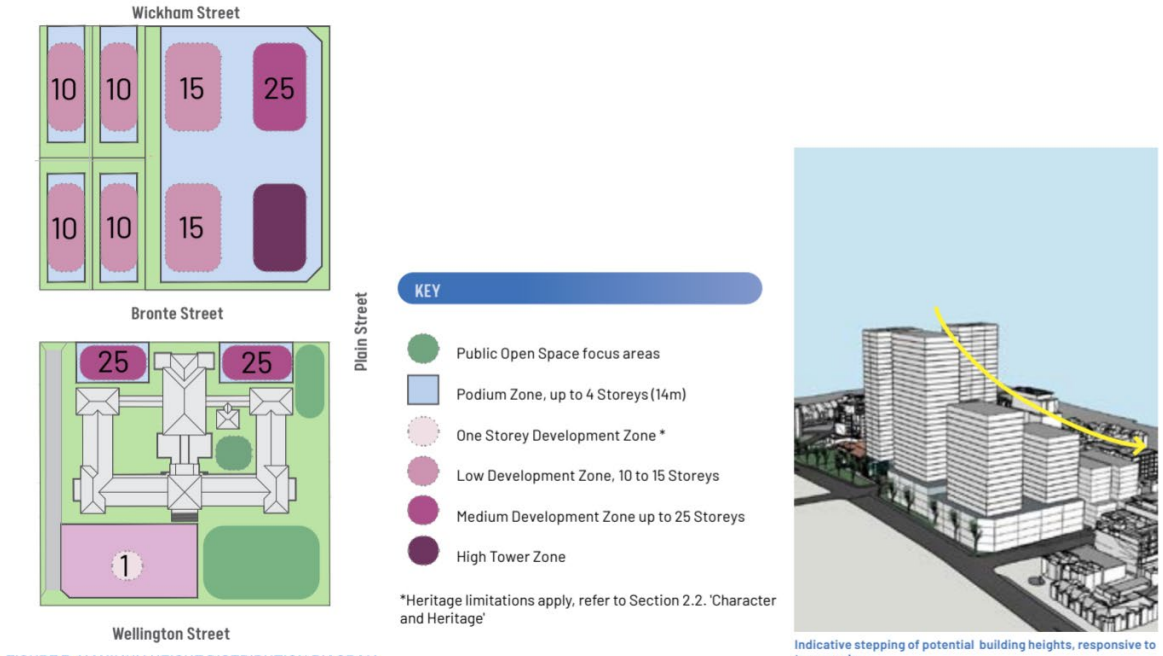


FIGURE 7: MAXIMUM HEIGHT DISTRIBUTION DIAGRAM

3.3 Plot Ratio

Objective

- Plot ratio floor space will be distributed on the site in the form of well-considered design outcomes that appropriately respond to the built form context of the locality, streetscape character and the heritage significance of the Perth Girls School building.
- Plot ratio floor space will be proportionate to community benefits delivered at the site, including heritage conservation and adaptation for public access, sustainability, public art, housing affordability and dwelling diversity outcomes.

Acceptable Outcomes

- In accordance with Table 1, a maximum plot ratio of 7:1 on the northern Perth Girls School site and a maximum plot ratio of 2.5:1 to the southern Perth Girls School site, subject to satisfying all Objectives of the Design Guidelines, the Scheme and other statutory requirements, including the achievement of:
    - a minimum 5 Star Green Star rating (as built certification) for new buildings;
    - a minimum 12% or more dwellings within the development provided as Affordable Housing;
    - a minimum 20% or more dwellings within the development provided as Adaptable Housing based on the Core Liveable Housing Design Elements advocated by Liveable Housing Australia; and
    - Integration of public art into the development.
- A maximum plot ratio of 8:1 on the northern Perth Girls School site, where in addition to the requirements for 7:1 above, the development achieves Design Excellence and satisfies the following:
    - heritage conservation and adaptive reuse of the Perth Girls School building as the first stage of any development proposal, including areas of public access;
    - the criteria of section 1.3 Discretionary Clause of this document;

- the development would have no greater impact on traffic movements on the local road network than a compliant development;
- the variation would not have a significant adverse impact on the current or intended amenity of the locality, and ensures an appropriate transition of scale from the site to the surrounding built form context; and
- the development achieves the following:
  - a minimum of 15% or more dwellings with the development provided as Affordable Housing.
  - the development achieves a 6 Star Green Star rating (as built certification), or demonstrated equivalent targeted alternative including an on-site grey water re-use scheme for landscape irrigation, toilet and laundry use.
  - an innovative program to minimise residential private vehicle use is provided on-site, combined with a reduction in parking bays to a maximum average of 0.8 bays per dwelling.

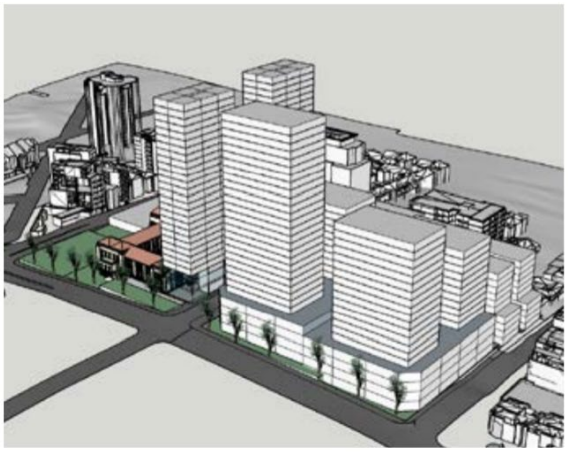
- In accordance with Table 2, a maximum plot ratio of 4:1 on single lots, and a maximum plot ratio of 5:1 on amalgamated lots subject to satisfying all Objectives of the Design Guidelines, the Scheme and other statutory requirements.

(Note: Acceptable Outcomes related to Green Star rating, Adaptable Housing, Affordable Housing or Public Art are to be in accordance with Planning Policy 1.3 – Development Policies for Normalised Redevelopment Areas).

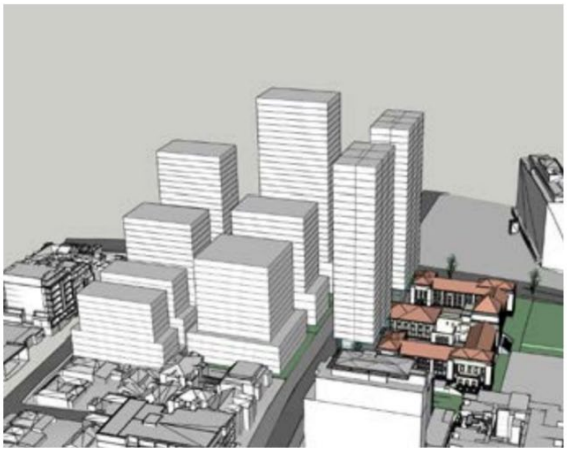
Figure 8: Indicative Massing Diagrams

8.1 Northern Site: depicts tower to ground built form development option
Southern Site: depicts option for towers to be positioned to the north of heritage building.

8.2 Northern Site: depicts semi-podium and partial tower to ground built form development option
Southern Site: depicts option for towers to be positioned to the north of heritage building.



8.3 Indicative stepping of built form responsive to the topography



8.4 Indicative stepping of built form responsive to the topography

Note:
The Figure 8 diagrams depict indicative massing of potential future development based on the Primary Controls Table. Other building forms may be proposed that are in accordance with the Primary Controls. The massing diagrams do not show the required design detail and articulation.

3.4 Building Height and Form

Objective

- New development on the southern site will be positioned and scaled to allow the heritage Perth Girls School building to be the key feature and visual focus of the site, protecting sightlines to the facade, whilst creating opportunities for improved public realm engagement and streetscape activation.
- Development on the northern sites will be positioned, scaled and articulated to respond to the surrounding context, Perth Girls School heritage building, streetscape and site topography; ensuring that significant height of any towers is offset by human scale design at street level and setbacks from neighbouring development.

Acceptable Outcomes

- Development on the northern precinct includes a range of building heights, with low to medium rise towers to the western side (adjacent to existing lower scale development) and medium to high rise tower/s to the southeast side, emphasising the ridge line of the topography and the hill-top aspect.
- New development opportunities on the southern precinct are limited by the need to provide respectful space, separation and views of the Perth Girls School building. Mid-rise towers may be possible between the building and Bronte Street, or elevated above the internal courtyards.
- Development in the south-west forecourt of the Perth Girls School site is designed to enhance views of the heritage building and provide a highly activated and engaging interface with Wellington Street. Any new building is single storey and excavated into the site, such that the height of all new structures is below the existing FFL of the main entry to the heritage building (approx. 24m AHD), is visually transparent at the street edge with a maximum average basement projection height of 1m above NGL and is setback a minimum of 3 metres from the street boundary.
- The 'high tower zone' accommodates a landmark tower element to accentuate and define the hilltop, positioned at the south east-most corner of Lot 775 to minimise interface impacts with neighbouring development (refer Figure 7).
- A maximum site coverage at ground floor level of 85% on the northern precinct and 55% on the southern precinct, to facilitate the provision of deep soil zones and landscaped areas at ground level and for natural light penetration.

- Basement floor plates are consolidated beneath the building footprint already nested above, with careful consideration and design of any basements proposed beneath heritage structures.
- Podium/lower tower levels are broken into human scale components through modulation, articulation, fine grained expression and variation in architectural detailing, materials, colours and textures, to create a visually interesting base for the tower above and contribute to a high amenity pedestrian experience.
- Roof tops are landscaped to provide an attractive outlook from above and incorporate functional spaces which promote surveillance of the street below.
- A 6m x 6m built form truncation is provided at each street corner for pedestrian and vehicle sight lines.
- Any exposed area of basement car parking is screened from public view through the use of landscaping, setbacks and/or embedded elements of visual interest responsive to the site context.
- If built form is to be delivered through a staged approach, staged delivery of built form to achieve positive streetscape outcomes throughout the development timeframe is demonstrated.

3.5 Tower Design

Objective

- Tower design, floorplates and arrangement will minimise building bulk, maximise potential for views, and ensure occupants have access to direct natural light and ventilation, while providing appropriate privacy separation.
- Towers will demonstrate exemplary contemporary design and provide visual interest through innovative use of materials and construction methods.

Acceptable Outcomes

- Towers to ground (without podium) demonstrate an activated and engaging, human scale ground floor pedestrian interface.
- A minimum 8m setback from the street boundary to any tower component, as measured from the lot boundary to the front façade of a building.
- On the southern Perth Girls School site, increased tower separation may be required subject to a heritage impact assessment.
- Towers on the southern Perth Girls School site are to be raised above the ridge line of the Perth Girls School building, with a 3-4 storey (14m) activated undercroft with circulation cores and other internal structures minimised, to allow unconstrained views to the heritage building.
- Tower floorplates on the northern Perth Girls School site are restricted to a maximum ratio of 50% of the tower envelope zone to facilitate the development of slender towers that minimise bulk and provide opportunities for views and solar access between buildings.
- Towers are separated by a minimum distance of 15 to 20 metres to ensure occupants have access to direct natural light, ventilation and provide appropriate separation for privacy purposes, as illustrated in Figure 5.
- Balcony projections into the street setback or internal tower separation areas may be considered, subject to achieving 12m minimum privacy separation, where permanently unenclosed/unscreened on at least two sides and expressed beyond the tower floor plate, with separation between projections to break up the appearance of mass.
- All façades are designed and articulated as if they were the primary frontage of the building.
- Building façades are designed to express the proportion of individual elements with a strong relationship and rhythm, provide interest through the inclusion of complementary architectural treatments and respond to the articulation and modular rhythm of the Perth Girls School architecture.

- Any tower element over 20 storeys in height is to feature one or more horizontal break(s) in the tower form, or increased setbacks to the upper levels to facilitate a landscaped terrace, to provide visual relief and assist with wind mitigation.

3.6 Roof Design

Objective

- The roof, as the fifth facade of a building, will be treated as an important component of the overall design composition and provide a memorable contribution to the local identity and way-finding in the city context.
- Roof spaces will be designed and used to enhance the amenity and sustainability of developments through use as landscaped open space and/or accommodating sustainability infrastructure, such as photovoltaic panels.

Acceptable Outcomes

- Tower elements and roofs are to be designed to contribute positively to the City skyline, with feature lighting of the roofline encouraged.
- Incorporate and conceal roof plant and lift overruns as an integral part of roof design, taking into consideration how the design of the roof level will appear from the street level as well as the outlook from above.
- Incorporate sustainability elements such as rain water, solar or wind collectors into an innovative building design solution.
- Podium and tower roofs are designed to provide accessible, functional and useable areas for commercial, communal residential or public use, respond to climatic conditions including 'green roof' access to northern sun, and promote surveillance of the street below.
- Weather mitigation measures and/or protection devices, responsive to the microclimate, are integrated into the design of rooftop outdoor spaces to enhance their usability in a range of weather conditions.
- Awnings and soffits visible from the public realm are of a high quality design integrated with the overall façade composition, and feature built in lighting where possible to enhance safety and visual interest.

3.7 Materials and Finishes

Objective

- High quality materials and finishes will be incorporated into building and landscape designs, which contribute to a high standard of design and enhance the quality of the public and private realm.
- Materials and finishes will contribute successfully to the overall design aesthetic and respond to the heritage significance of the site and local context, contributing to a sense of place.

Acceptable Outcomes

- A contemporary design aesthetic is clearly expressed through a cohesive palette of high quality, innovative and imaginative materials and finishes, appropriate for the inner city context, with distinct references to the heritage significance of the site.
- The original Perth Girls School fabric is sensitively referenced in the design of new development.
- Employ robust, low maintenance materials in the higher parts of a building (prefinished materials rather than paint), and natural, tactile and visually interesting materials at the lower levels near the public interface to reinforce a human scale.

- Incorporate high performance glazing products to achieve sustainability outcomes, while maintaining a transparent interface with the street through the use of clear glazing, with low reflectivity, at ground level.
- Avoid extensive use of glazing in building forms to avoid adverse light and heat reflection on adjoining spaces.
- A detailed materials schedule is required to be submitted as part of any development application to confirm achievement of the Acceptable Outcomes and/or Objective for materials and finishes.

3.8 Land Use

Objective

- A diverse mix of creative, cultural and active land uses will be provided at the southern site to support the residential population in East Perth, sustain ongoing activation of the public realm, and assist with achieving the Perth Girls School Vision.
- New development at the northern site and single lots will be predominantly residential, supporting inner city population growth and viable activation of the southern site.
- Residential uses will be located to take advantage of views around the city (where available).
- The Perth Girls School building will be predominantly occupied by cultural and creative land uses that preserve the heritage character and minimise impacts to the building fabric, bringing public access and public life to the site.
- Land uses will not undermine the performance of the nearby Hay Street East and Royal Street activity centres.

Acceptable Outcomes

- A diverse mix of residential development is provided within the sites, and located to take advantage of views where possible, including primarily permanent residential as well as serviced apartments, short stay dwellings, aged care accommodation, student housing and affordable housing.
- The Perth Girls School building is occupied by an innovative and diverse mix of land uses with retail, commercial, and dining and entertainment uses that will complement and support the long term viability of arts and cultural and creative industry uses within the building. For example, small scale cinema, theatres, art galleries and artist studios are mixed with restaurants, small bars, creative retail opportunities, health services or child care. Opportunities for affordable live-work spaces for artists are also encouraged.
- There is an opportunity in the Wellington Street forecourt for a well-designed single storey retail use (e.g. shops, market or supermarket) to serve the East Perth population, subject to active frontages to Wellington Street, basement parking and preserving key views to the Perth Girls School building.
- A retail impact assessment report will be prepared by a suitably qualified consultant, and submitted as part of any development application proposing a significant retail component, with a specific focus on the Hay Street East and Royal Street activity centres.
- Single lots will contribute to a diverse mix of residential dwellings.
- Land uses align with the preferred land uses listed in Table 3.

Table 3: Preferred Land Uses

	Perth Girls School Sites (northern and southern sites)	Single Lots
Perth Girls School Building	Culture and Creative Industry Category land uses, Restaurant/Cafe, Small Bar, Shop, Personal Services, Community Facility; Office (upper floors)	N/A
GROUND LEVEL	Shop, Shopping Complex, Market, Business Services, Consulting Rooms	Multiple Dwellings, Serviced Apartments, Specific Purpose Accommodation.
UPPER LEVELS	Multiple Dwellings, Serviced Apartments, Hotel, Specific Purpose Accommodation, Office, Commercial Training Centre.	Multiple Dwellings, Serviced Apartments, Specific Purpose Accommodation.

3.9 Active Edges

Objective

- Development will be designed to address and activate primary streets and key frontages, with high levels of physical and visual interaction between buildings and pedestrians at the street level to facilitate a safe, vibrant, diverse and inviting environment.

Acceptable Outcomes

- Provide activation of buildings by:
  - incorporating a variety of uses at ground level, with the provision of entry doors providing direct pedestrian access from the street, shop-fronts, operable doors and windows to cafés and restaurants;
  - incorporating active uses, balconies and roof top spaces overlooking the street; and
  - designing façades to be visually transparent at ground level to promote surveillance of the street and visible indoor activity.
- Building entry points are:
  - a clearly identifiable element within the façade design;
  - sheltered, well-lit and highly visible spaces to enter the building; and
  - provided with clear sight lines to and from the street to provide for a safe environment.
- Utilities and service infrastructure are either located within basement(s) or screened from public view and seamlessly integrated into the design of the development in terms of location, material use and architecture.
- Utilities and service infrastructure are minimised along all streets frontages.
- Fencing within the front setback area is no higher than 1.2m above finished ground level of the adjacent footpath or road and at least 75% visually permeable. Fencing along Plain and Wellington Streets is avoided.
- The difference between the finished ground floor level and footpath level is minimised and managed to provide universal access to all entry points and minimise the disruption of physical and visual interaction with public realm.
- Retail development on Wellington Street is designed to provide an active frontage with direct access to and from the street to maximise physical and visual interactivity along this edge, with a continuous, lightweight awning projection over the adjacent public realm for weather protection.
- Development at the corner of Bronte and Plain Streets is designed to support active land uses and engage with the public realm, such as through the provision of bi-fold doors to promote alfresco dining, and a focus of public life and activity along these street edges.

Figure 9: Conceptual Visualisation of Wellington Street and Landscaping

FIGURE 9: CONCEPTUAL VISUALISATION OF WELLINGTON STREET RETAIL AND LANDSCAPING

3.10 Wind

Objective

- Buildings and public spaces will be designed and oriented to prevent any increase in adverse wind conditions surrounding the site and mitigate the impacts of wind on outdoor amenity, to achieve appropriate levels of comfort and safety commensurate with the intended function of each outdoor space.

Acceptable Outcomes

- The design of buildings and open space areas is informed by wind tunnel and/or computer model testing, during concept and detailed design stages to avoid induced winds in outdoor spaces, including the public realm.
- Wind amelioration strategies are integrated into the building design from concept stage to achieve appropriate comfort levels for the proposed land uses and the intended function of associated outdoor spaces, including the adjacent public realm (such as alfresco dining, play/recreation, window shopping, waiting in plazas/at building entries and residential private and communal open space areas).
- Use of 'add-ons' such as screening or landscaping to provide direct wind amelioration will only be accepted as a tool to fine tune the design.
- No permanent weather protection structures, such as wind barriers for alfresco areas, are permitted in the public realm (with the exception of overhead awnings attached to the building).
- A wind impact report, prepared by a qualified wind consultant, is submitted as part of the development application, which details the modelling undertaken and measures implemented to satisfy the Acceptable Outcomes and/or Objective for wind.

3.11 Natural Light and Ventilation

Objective

- Buildings will be orientated and internal spaces arranged to maximise direct access to natural light and ventilation within and through the development to optimise internal amenity and sustainability.
- The impact of overshadowing from new development on neighbouring buildings and open spaces, including the public realm, will be minimised to preserve the amenity of the surrounding area.

Acceptable Outcomes

- The massing and orientation of building forms is informed by a shadow analysis, from concept stage, to minimise the impact of shadow cast by the development on surrounding sites and maximise sunlight penetration into the building, streets and public places.
- The design maximises north aspect and the number of single aspect south facing apartments is minimised.
- Living rooms and private open spaces are oriented to maximise access to direct sunlight (refer to part 4.1 of the R-Codes Vol.2 for further design guidance on solar access).
- Dual aspect apartments have a maximum depth of 18m, measured from glass line to glass line.
- Every habitable room (as defined in the R-Codes Vol.2) has a window in an external wall with a total minimum area of not less than 10% of the floor area of the room, with natural light not borrowed from other rooms or light wells.
- Measures for shading and glare control are incorporated in the design, with particular consideration of summer heat/glare conditions.
- At least 60% of apartments are naturally cross ventilated (refer to part 4.2 of the R-Codes Vol.2 for further design guidance on cross ventilation).
- All common internal corridors have access to natural light and natural ventilation.
- Well-located, screened outdoor clothes drying areas are provided for each dwelling, or in a central shared space.
- At least 50% or 125m^2, whichever is the lesser, of the communal and public open space areas should receive a minimum of two hours of sunlight each day between 10am and 2pm from August through to April.
- A report(s) and/or diagram(s), prepared by a suitably qualified professional is required to be submitted as part of any development application to demonstrate satisfaction of the Acceptable Outcomes and/or Objectives for natural light and ventilation.

3.12 Apartment Size and Layout

Objective

- Apartment size and layout will support resident amenity and lifestyles, with functional, well organised room configurations that enable adaptability.
- A diversity of dwelling size, tenure and affordability options will be provided that are suitable to a range of residents/household types, including families and key workers.

Acceptable Outcomes

- Minimum floor to ceiling heights as follows:
  - Habitable rooms 2.7m; and
  - Non-habitable rooms 2.4m.
- Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobes).
- Bedrooms have a minimum dimension of 3m (excluding wardrobe space).

- Living rooms or combined living/dining rooms have a minimum width of:
    - 3.6m for studio and 1-bedroom apartments; and
    - 4m for 2-bedroom or greater apartments.
- Habitable room depths do not exceed 3x the ceiling height.
- Adequate internal storage space is provided within each dwelling for daily needs, separate to the minimum storage space required, including kitchen, bathroom, bedroom and laundry storage cupboards/wardrobes.
- Noise sensitive rooms (such as living areas and bedrooms) are located to avoid noise impacts from mechanical plants, lifts, building services, non-residential uses, car parking, communal areas and other dwellings.
- Wardrobes in adjacent bedrooms are co-located to act as sound buffers
- Compliance with Planning Policy 1.3 – Development Policies for Normalised Redevelopment Areas Part 3 - Affordable and Diverse Housing and Part 4 - Adaptable Housing.

3.13 Private Open Space

Objective

- Functional and useable private open space will be provided to enhance resident amenity, and provide depth and visual interest to the building form.
- Private open space will be sited, oriented and designed to appropriately respond to the environmental context.

Acceptable Outcomes

- All apartments have primary balconies (or courtyards) meeting the standards of Table 4.
- Private open space design is integrated into and contributes to the overall architectural form and detail of the building.
- Private open space is:
    - oriented to maximise access to northern sunlight where possible;
    - directly accessible from and connected to a habitable living space within the dwelling;
    - designed to be practical, useable and appealing;
    - designed to reduce the level of noise reaching the apartment facade, including acoustically solid balustrades and/or acoustic absorption to the underside of the soffit within the balcony; and
    - not used for car parking, storage or placement of air-conditioning units.
- A minimum of 75% of the area above a 1 metre balustrade/handrail is permanently unenclosed (balcony) or fully openable (winter garden).
- Enclosed balconies (winter gardens) may be considered for upper levels of towers, where there is a demonstrated need or benefit, provided the winter gardens:
    - meet the minimum size requirements for balconies and don't replace a functional space internally;
    - include an operable sliding/lifting glass system to give a clear opening between the balustrade and soffit and enable the space to function as a balcony in fine weather;
    - meet drainage and floor finish standards for an outdoor environment;
    - are naturally ventilated; and
    - are designed to appropriately balance natural light access with environmental performance, ensuring appropriate levels of internal comfort.
- Enclosed balconies, including winter gardens, are included in the calculation of plot ratio area.

Table 4: Balcony/Courtyard Acceptable Outcomes

Size of Dwelling	Min. Size of Balcony/Courtyard (sqm)	Min. Dimension (m)
Studio/1 Bedroom	8	2
2 Bedrooms	10	2.4
3 Bedrooms (or greater)	12	2.4
Ground floor/apartment with a terrace	15	3

3.14 Storage

Objective

- All dwellings are provided with a dedicated storage space proportionate to the dwelling size, to preserve the liveability and functionality of residential apartments and reduce the need for storage off-site.

Acceptable Outcomes

- Provision of a store with a minimum area of $4m^2$, and a minimum dimension of 1.5m, for apartments with 2 or less bedrooms.
- Provision of a store with a minimum area of $5m^2$, and a minimum dimension of 1.5m, for apartments with 3 or more bedrooms.
- External stores are secure, fully screened and designed and located to be readily accessible in proximity to dwellings (external to apartments but integrated within the building/basement) and do not require the movement of parked vehicles for access purposes.
- Sufficient internal storage areas are provided within each residential dwelling.

3.15 Circulation and Common Space

Objective

- Circulation and common spaces are designed as functional, welcoming and attractive spaces, to create spaces with a high level of amenity and comfort that foster a sense of community.

Acceptable Outcomes

- Circulation corridors are at least 1.5m in width.
- The width of a lift landing exceeds the internal depth of the lift car.
- Day light and natural ventilation is provided to all common circulation spaces, with windows positioned to optimise daylight and capture views, such as adjacent to the core or at ends of corridors.
- Corridor layouts provide clear direct and legible access routes.
- Corridors greater than 12m in length from the lift core include design measures to improve amenity, such as spaces for seating, widening at apartment entries and/or varied ceiling heights.

3.16 Visual Privacy

Objective

- The orientation and design of buildings, windows and balconies minimises direct overlooking of habitable rooms and private outdoor living areas within the site and of neighbouring properties, without excessive reliance on high sill levels or permanent screening of windows and balconies.

Acceptable Outcomes

- Major openings and balconies achieve a minimum setback distance of 6m from common lot boundaries, and 12m separation within the site.
- Protection of privacy is achieved with minimal screening, to preserve natural light access and amenity.

3.17 Communal Open Space

Objective

- Communal open space will be integrated within the development and designed to enhance amenity for residents or workers and support a variety of activities and functions.

Acceptable Outcomes

- A minimum area equivalent to 20% of the lot area is provided as communal open space in the form of landscaped, accessible podium/roof terraces and/or plazas.
- Communal open space is to be incorporated into the design of the buildings and actively programmed as gardens, green space or active or passive recreation space.
- A portion of the communal open space shall be provided at ground level including deep soil zones to allow for the growth of mature trees.

3.18 Landscape Design

Objective

- A mix of soft and hard landscape treatments, including mature plantings in deep soil zones, will be integrated into developments at ground levels, rooftops, balconies and on building façades, to provide amenity and contribute positively to streetscape character and a strong sense of place.
- The landscape design will be contextually responsive and environmentally sensitive, provide shelter and shade in public and communal spaces to enhance comfort and amenity levels, and assist in reducing the urban heat island effect and management of stormwater runoff.
- Landscape design and ground floor setbacks contributes to the creation of Plain Street as a tree-lined boulevard with a green edge, visually linking to the East Perth Cemeteries green space.
- High quality at ground landscaping will enhance the setting of the Perth Girls School heritage building and its cultural heritage significance and any public spaces provided on site.

Acceptable Outcomes

- All development applications are to include a landscape plan that has been prepared in accordance with the Water Corporation's waterwise criteria for landscaping, and the following Acceptable Outcomes.
- Biophilic design principles are incorporated throughout the development internally and externally.
- Landscape design is to be viable and sustainable through:
    - minimisation of water and maintenance hungry landscaping, through use of native and water-wise plants and/or irrigation and water reuse infrastructure;
    - selection of tree and shrub species considers size at maturity and the potential for roots to compete; management of runoff from rainfall events in accordance with water sensitive urban design principles; and

  - minimisation of deciduous tree species, as their lack of canopy cover during winter results in larger stormwater volumes and high leaf litter blocks stormwater systems and releases excess nutrients to receiving waterbodies.
- Landscape design contributes to amenity and recreation through:
  - provision of social spaces (e.g. barbecue areas and vegetable gardens) and clothes drying area(s);
  - provision of deep root soil zones with mature trees and soft landscaping, equating to at least 10% of the site area (refer to section 3.3 of the R-Codes Vol.2 for further guidance on the design of deep soil areas);
  - enhancing microclimate by considering prevailing winds, sun angles and a balance between evergreen and deciduous trees; and
  - provision of 'green roofs' to reduce storm water generation, enhance the soft landscape aesthetic of the development, improve thermal massing and assist in reducing the urban heat island effect.
- Landscape design contributes to the amenity and user comfort of the streetscape and builds upon the existing sense of place and heritage.
- Landscape design provides high quality, landscaped public spaces that align with major pedestrian routes and desire lines.
- Landscaped rooftops sustain medium scale vegetation.
- Landscape design utilises existing trees where possible and any new trees are positioned so as to frame rather than obstruct key views to the heritage building.

3.19 Environmental Sustainability

Objective

- Sustainable initiatives will be integrated into the design, construction and management of new buildings and open spaces to limit the environmental impact of new development.
- Development will ensure resource efficiency, minimise use of non-renewable energy and potable water and reduce the production of waste, pollution and other damaging emissions.

Acceptable Outcomes

- All new buildings achieve a minimum 5 Star Green Star Rating ('Design Review' and 'As Built' certification from the Green Building Council of Australia (GBCA), and demonstrate that the following specific initiatives are incorporated into the design:
  - water efficiency;
  - strategies to minimise potable water usage through rain water capture and re-use and/or waste water recycling;
  - energy efficiency and energy efficient fixtures and appliances; and
  - a naturally comfortable indoor environment including access to natural light and ventilation as well as thermal comfort levels.
- Development incorporates passive solar design measures to optimise heat storage in winter and reduce heat transfer in summer.
- Development incorporates carbon zero or carbon neutral design considerations.
- A Green Star assessment report, prepared by a suitably qualified consultant (GBCA certified assessor), is required to be submitted as part of any development application to confirm satisfaction of the Acceptable Outcomes and/or Objectives.
- Stormwater run-off from constructed impervious surfaces generated by small rainfall events is retained or detained onsite and treated at-source as much as practical.
- In the event that ongoing management of groundwater is required, for example due to basement levels or use of subsoil drains, any water quality issues will need to be addressed. The groundwater may need to be treated prior to leaving the site.

- Prior to any dewatering operations occurring on site, a Dewatering Management Plan is to be prepared and submitted in accordance with the relevant standards of the Department of Biodiversity, Conservation and Attractions.
- Compliance with Planning Policy 1.3 – Development Policies for Normalised Redevelopment Areas Part 2 – Green Buildings.

3.20 Safety

Objective

- Developments will be designed to minimise the opportunity for crime and maximise the sense of safety through the design and management of built and landscaped environments, including maximising passive surveillance of the public realm and incorporation of lighting, to highlight architectural features, and support a safe urban environment during all hours of the day and night.

Acceptable Outcomes

- A report prepared by a suitably qualified professional will be required to be submitted as part of any development application to confirm that the development has been designed in accordance with Crime Prevention Through Environmental Design (CPTED) principles.
- Lighting is integrated into the built form at street level and upper floors to highlight architectural features, main entrances, parking areas, landscaping and the corners of buildings, to reinforce the sense of place and enhance safety at night.
- Ground floor and podium levels are designed to provide passive surveillance of the public realm.

3.21 Universal Access

Objective

- Buildings will incorporate equitable universal design principles allowing people with disabilities or those who require high levels of accessibility to live, work and visit the Redevelopment Area.

Acceptable Outcomes

- Universal access is provided in accordance with the requirements of the Disability Discrimination Act 1992 and relevant Australian standards.
- Where the ground floor is elevated above finished footpath level ramps that facilitate universal access shall be accommodated within the interior of the building to reduce their visual impact and assist in achieving a strong built edge to the street boundary.
- Compliance with Planning Policy 1.3 – Development Policies for Normalised Redevelopment Areas Part 4 – Adaptable Housing.

4.0 PARKING ACCESS AND SERVICES

4.1 Site Access

Objective

- The number, size and visual impact of vehicle access points to each lot will be minimised to reduce conflict between pedestrians, cyclists and vehicles and to promote attractive streetscapes by prioritising safe and accessible pedestrian/cyclist movements.
- Clear, direct and safe access connections will be provided to and from cyclist, pedestrian and public transport routes.

Acceptable Outcomes

Pedestrian and Cyclist Access:

- Safety is maintained by minimising conflict points between vehicles and pedestrian/cyclist movements through careful site planning to achieve separated access routes for the different modes of travel.
- Pedestrian and cyclist access from the street and from car park and bicycle parking areas shall be clear, direct and safe. All pedestrian and cyclist entrances shall have casual surveillance from within the development and shall be covered to provide protection from the elements.
- Development and open spaces are oriented to be easily accessible from adjacent cycling routes to encourage site access by bicycle (refer Figure 10).
- Pedestrian entrances and access ways are designed and configured to provide direct, legible access to nearby public transport connections.

Vehicle Access:

- Vehicle access is to be generally in accordance with Figure 10, and supported by a detailed Access Strategy to demonstrate appropriate consideration of access and egress arrangements to and from the site and minimise impacts on the existing network, including:
    - Residential character of Bronte and Wickham Streets;
    - Public transport connections along Wellington Street; and
    - The signalised intersection at the corner of Plain and Wellington Streets, with the cost of any required modifications to existing traffic and transport infrastructure to facilitate safe and functional access to be borne by the applicant/developer.
- Vehicle and loading dock/service access is combined to minimise adverse impacts on the streetscape.
- Crossovers shall be located to avoid existing street trees and provide sufficient clearance to allow for root and canopy growth.

Figure 10: Access Plan

FIGURE 10: ACCESS PLAN

4.2 Car Parking

Objective

- The provision of on-site car parking bays will be minimised, and parking areas designed, to encourage use of alternative, more sustainable forms of transport, and provide future proofing for new vehicle technologies.
- Parking areas are located and designed with careful consideration for site levels, public realm impacts and the potential for future adaptive reuse.

Acceptable Outcomes

- Parking is to be provided in accordance with Table 5.
- All non-residential parking bays are required to be licensed by the Department of Transport in accordance with the Perth Parking Policy 2014 and Perth Parking Management Act 1999.
- A commercial car park may be considered to support weekly retail needs for East Perth residents subject to a Transport Impact Assessment and Management Plan submitted at the development application stage to mitigate any impacts on the immediate and surrounding roads and the operation of the development generally.
- Parking is located within a basement and/or concealed behind the building façade and sleeved with active uses, with all above ground parking to be counted in the calculation of plot ratio. At least 50% of the basement parking floor area is to be below natural ground level, in order for it to be excluded from plot ratio calculations.
- Parking areas, especially those above ground, are designed to be adaptable for future uses, for example:
    - floor to floor heights of at least 3.1m;
    - car parking not located on ramps; and
    - the structure of the building makes provision for future adaptive reuse with the ability to insert openings for natural light and ventilation.
- Basement parking is designed with consideration to levels across the site and will not protrude more than 1m above natural ground level at any point, unless stated otherwise in these Design Guidelines, to minimise blank walls and prevent negative visual impact on the streetscape and active edges.
- Charging stations for electric vehicles and scooters are incorporated into parking areas, with the electrical supply to provide vehicle charging capacity for at least 50% of the total number of bays.
- Provisions of bays for innovative car-sharing programs, reciprocal parking, shared parking arrangements and car stackers are encouraged, to maximise efficiency of use.
- Provision of a minimum of two bays for fixed-point (i.e. not floating) car sharing vehicles in any public car parking area.
- A Transport Impact Assessment (TIA), prepared in accordance with the WAPC's TIA Guidelines 2016 and supported by SIDRA modelling, and a Car Parking and Traffic Management Plan is required to be submitted as part of any development application to demonstrate effective and safe management of traffic movements to, from and within the car parking areas, including service and waste vehicle access.

Table 5: Car Parking Requirements

Land Use	Maximum Number of Parking Bays
Non-Residential	As per the Perth Parking Policy. Scooter/motorbike parking is to be provided at a rate of 1 bay per 10 parking bays
Residential	Maximum average of 1 bay per dwelling
Residential Visitor	N/A

4.3 Bicycle Parking and End-Of-Trip Facilities

Objective

- The configuration and design of buildings will encourage and support the use of alternative active travel modes, including cycling.

Acceptable Outcomes

- Developments are provided with bicycle parking and end of trip facilities in accordance with Table 6.
- All bicycle parking facilities are to be designed and constructed in accordance with Australian Standard 2890.3 (as amended) and Austroads Guide to Traffic Engineering Practice Part 14 – Bicycles.
- Bicycle parking for visitors should be located at ground level adjacent to the building entry and such that it:
    - allows for passive surveillance from public spaces such as from roads and other buildings;
    - does not disrupt pedestrian movement(s);
    - is accessible from the road and cycle path; and
    - is in well-lit areas.
- Bicycle parking facilities for commuting staff are designed in accordance with CPTED principles to promote the safety and security of users and be co-located to promote efficient use.
- Lockers and locker rooms are ventilated and of a size sufficient to allow the storage of cycle attire and equipment.
- Charging stations for electric bicycles and other micro mobility means are incorporated into bicycle parking areas, with the electrical supply and car parking distribution boards to provide vehicle charging capacity for at least 50% of the total number of bays.
- Non-residential car bays located near bicycle and end or trip facilities, are designed to facilitate later adaptation for expanded bike parking facilities in future, should the demand profiles change.
- Where incorporated into private storerooms, residential bicycle parking spaces are designed and marked as designated spaces at the front of the storage areas, and are provided in addition to the required minimum area.
- A Bicycle and End-of-Trip Facility Management Plan is required to be prepared and submitted as part of any development application, to demonstrate appropriate regimes for regular cleaning and maintenance, monitoring of use and occupancy rates, and locker allocations.

Table 6: Bicycle Parking Requirements and End-of-Trip Facilities

Use	Requirement
Bicycle Parking	Bicycle parking is provided at a minimum rate of: a. 2 bicycle spaces per dwelling, may be added to residential storeroom or in a shared bike parking area. b. 1 bay per 10 dwellings or 200m² NLA for visitors, located adjacent to the main public entrance of a building. c. 1 bay per 100m² of net leasable area (rounded up) for staff of non-residential uses.
End-of-Trip Facilities	A minimum of 2 lockers is to be provided for every non-residential bicycle bay A minimum of two female and two male showers, located in separate changing rooms, for the first 10 non-residential bicycle bays. Additional showers to be provided at a rate of one male and one female shower for every 20 bicycle bays thereafter. At least one unisex toilet to be provided for every 10 showers or part there of.

4.4 Building Services

Objective

- Services and related hardware required for the function of buildings are designed and located in a manner that ensures they meet changing needs over time and do not negatively impact on the architectural design of the building or the character and amenity of the area.
- Site and building services are to be fully integrated into the design of buildings or screened from public view.

Acceptable Outcomes

- Loading and service areas, storage areas and ancillary equipment such as mechanical plant, piped and wired services, fire booster cabinets, service meters and roof plant are concealed from public view and integrated into the architectural design in a manner that does not undermine the amenity of the area or quality of the development.
- Where required to be accessible from the street, services and any associated cabinets will be located on secondary streets and integrated in architectural treatment of facade, in terms of both colour and design.
- Air conditioning units, pool filtration equipment, motors, pumps and mechanisms and similar items must be suitably located in areas that minimise the impact on neighbours, screened from public view from all directions, and be compliant with the provisions of the Environmental Protection (Noise) Regulations 1997.

4.5 Waste Reduction and Management

Objective

- Waste Management will be planned and co-ordinated as an integral component of the design and development process, with bin enclosures screened from view of the street and located to ensure odours and sound emissions are minimised.
- Sustainable waste management will be achieved through the combined strategies of waste reduction, reuse and recycling, waste awareness and performance monitoring.

Acceptable Outcomes

- Development is to incorporate sufficient space for on-site storage and collection of waste, in accordance with waste collection requirements.
- A Waste Management Plan is to be prepared and provided at development application stage to demonstrate satisfaction of the above Objectives.
- Development is to be designed to facilitate recycling of waste.