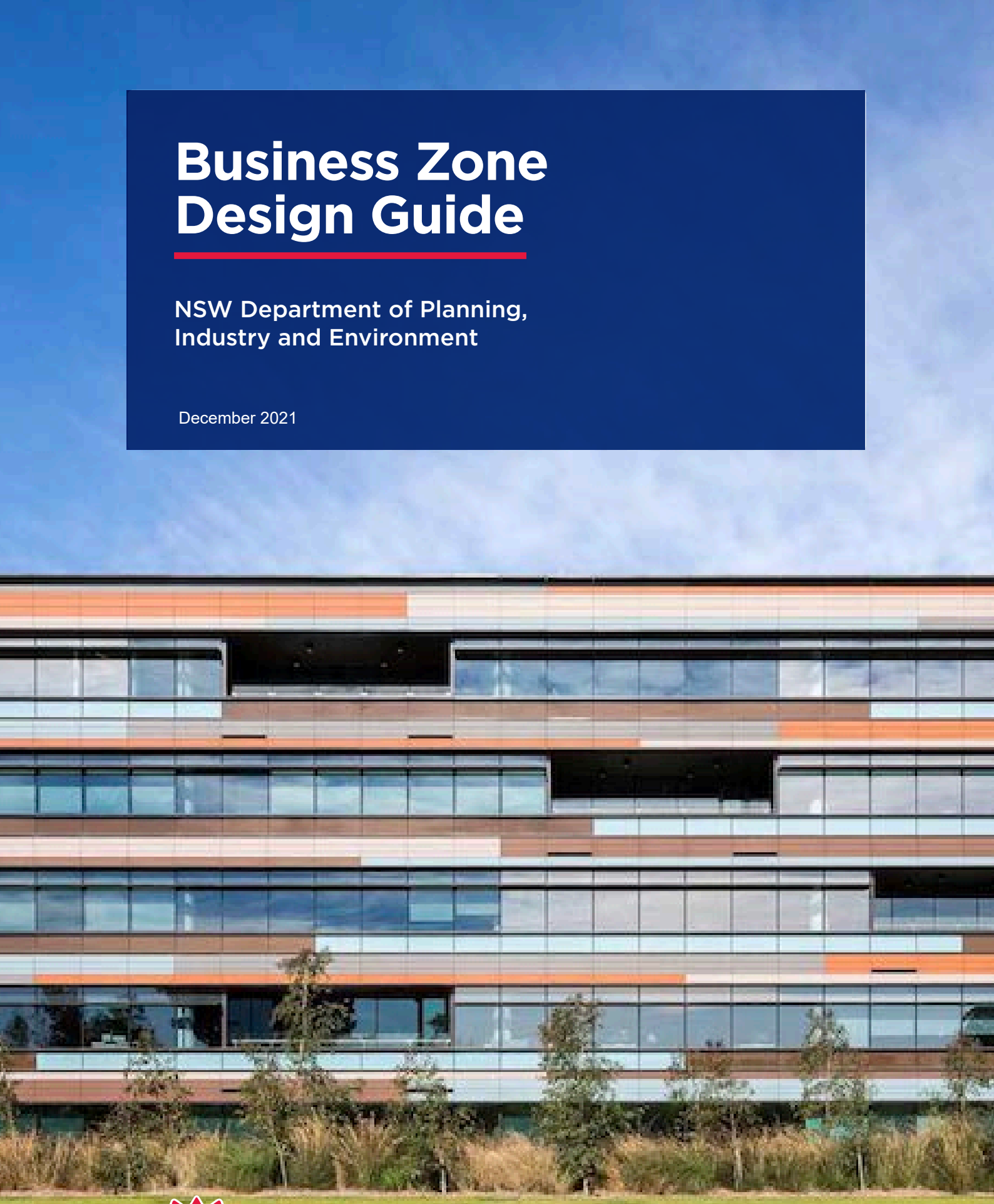
Business Zone Design Guide

NSW Department of Planning, Industry and Environment

December 2021



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Acknowledgment of Country

The Department of Planning, Industry and Environment acknowledges the Traditional Custodians of the land and pays respect to Elders past, present, and future. We honour Australian Aboriginal and Torres Strait Islander peoples' primary cultural and spiritual relationships to place, and their rich contribution to our society. To that end, all our work seeks to uphold the idea that if we care for Country, it will care for us.

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BUSINESS ZONE DESIGN GUIDE

Acknowledgements
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Introduction

About the Guide

Aims of the Guide

The Business Zone Design Guide (BZDG) is intended to help achieve better design and planning for developments by providing a suite of design guidelines and criteria for complying development.

The aims of the guide are to:

- Deliver quality and enduring design outcomes for developments in business zones that are responsive to place and context;
- Manage surrounding amenity and the environmental impacts of development;
- Ensure developments are connected to the street and provides a safe environment for visitors and workers;
- Improve the integration of green infrastructure, and sustainability outcomes for development and;
- Provide guidance on how to prepare the Design Verification Statement.

A Design Verification Statement is required by the EP&A Regulations for any part 5A complying development application in B5,B6 or B7 zones. The BZDG sets out the development standards and design criteria that must be complied with in order to obtain Complying Development Certificate.

Purpose of the Guide

The BZDG provides planning and design standards for a range of development types across NSW.

The BZDG will assist in the preparation of the Design Verification Statement as required by the EP&A Regulations.

Schedule 1 Clause 4AA(3)

Who is the Business Zone Design Guide for?

The Business Zone Design Guide has been prepared to assist developers and designers when designing and preparing a complying development proposal for certain types of development within B5, B6, and B7 zones.

What this Guide is Not

This Guide has been prepared as a supporting document for the Codes SEPP. **It does not replace the Codes SEPP**, and in all instances, if there is a discrepancy between the Guide and the Codes SEPP, the Codes SEPP takes precedence.

Part 5A Complying Development in B5-B7 Zones (or equivalent) requires a Design Verification Statement prepared by an architect registered with the NSW Architects Registration Board.

When does the Business Zone Design Guide apply?

The BZDG applies to specified complying development under Part 5A of the Codes SEPP. In particular, within the following parameters:

Land use zones:

- B5 Business Development
- B6 Enterprise Corridor
- B7 Business Park

Or their equivalent employment zones.

Maximum Floorspace (Clause 5A.19)**:**

- LEP Floorspace up to 10,000m^2 for any new building works

Maximum Height (Clause 5A.21):

- LEP Height up to 21m and 5 stories

The specified purposes are:

- amusement centres,
- boat building and repair facilities,
- commercial premises,
- community facilities,
- depots,
- entertainment facilities,
- function centres,
- health consulting rooms,
- industries,
- information and education facilities,
- medical centres,
- recreational facilities (indoor),
- storage premises,
- vehicle body repair workshops,
- vehicle repair stations,
- veterinary hospitals,
- warehouses or distribution centres.

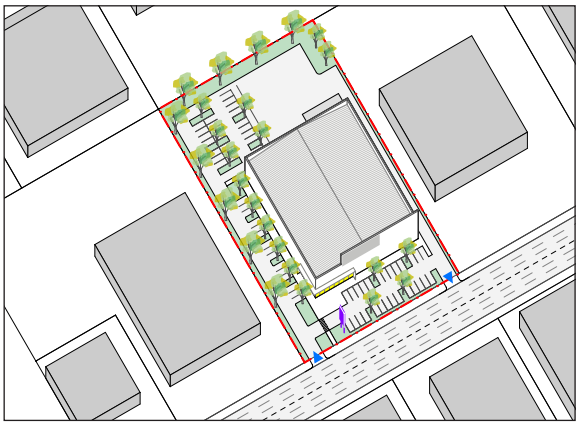
The following are not specified purposes and are excluded from the BZDG:

- funeral homes,
- markets,
- potentially hazardous industries, and potentially offensive industries,
- pubs,
- registered clubs,
- restricted premises,
- retail premises that sell firearms,
- roadside stalls,
- sex services premises,
- small bars.

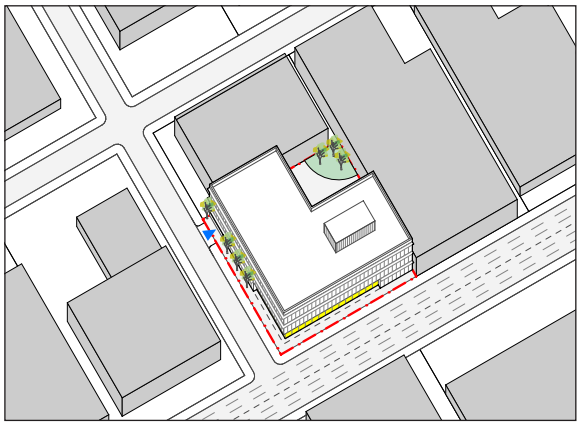
The BZDG applies only to commercial, business and related land uses under Part 5A of the Codes SEPP. It does not apply to residential land uses.

Application

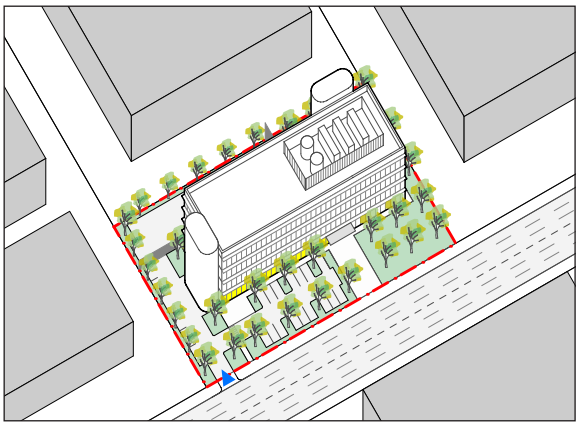
The BZDG provides guidance for certain permissible development within **B5, B6, B7** zones. Some typical examples of development in these zones are illustrated below.



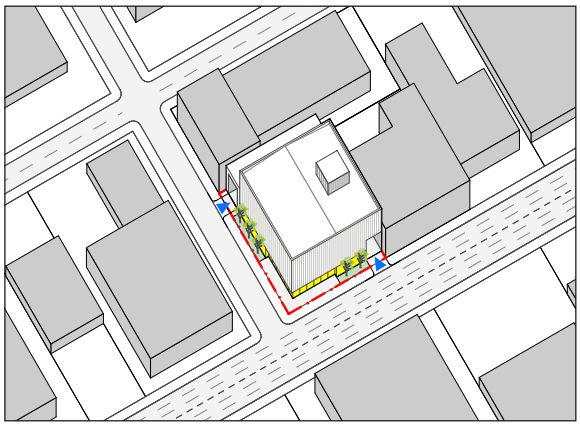
SINGLE STOREY SPECIALTY RETAIL ON A MAIN ROAD, WITH SURFACE PARKING



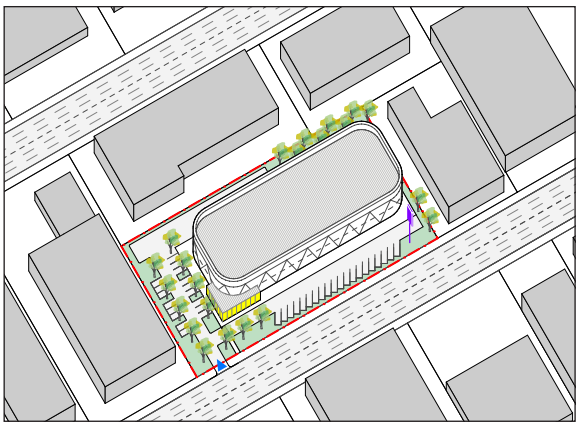
3 STOREY COMMERCIAL BUILDING ON A CORNER SITE. BUILT TO BOUNDARIES, WITH BASEMENT PARKING



5 STOREY OFFICE BUILDING IN A BUSINESS PARK AREA. LARGE AREAS OF LANDSCAPING, WITH SURFACE AND BASEMENT PARKING



3 STOREY SELF STORAGE STORAGE FACILITY. BUILT TO BOUNDARIES AND WITH A HIGH LEVEL OF LOADING ACCESS REQUIRED.



CAR SHOWROOM ON MAIN ROAD. LARGE AREAS OF HARDSTAND FOR VEHICLE DISPLAY OFFSEET BY CONTIGUOUS AREAS OF LANDSCAPING

Requirements for Complying Development

The requirements for complying development in B5-B7 zones are set out in:

- Codes SEPP (Part 1 and Part 5A)
- EP&A Regulations
- LEPs (Standard Instrument)

The following tables provide a summary of requirements for complying development including:

Requirements for Complying Development

Exclusions - where complying development is not permissible

Permits required for complying development

Plans and documents required

The relevant clauses of the legislation should be referred to for detail and confirmation of compliance.

Requirements

Clause	Requirement
Codes SEPP	
1.18 General Requirements	• Must be permissible under an EPI applying to the land • Must meet the relevant provisions of the BCA
5A.6B(6)	• Must not result in building over a registered easement • Must not result in more than 1,000m² of native vegetation being cleared
5A.6C	• Food and drink premises must comply with AS4674-2004, have a maximum capacity of 100 patrons, display a sign showing the maximum capacity • Storage premises must not be used for the storage of data or IT hardware (eg. data centres)
5A.6K (2)	• CDCs on flood control lots to accommodate several flood related building specifications
Local Environment Plans (Standard Instrument) Note: specific LEPs may include additional requirements in Schedule 3	
3.2	• the development must be permissible with consent in the zone it is carried out • Must meet the relevant deemed-to-satisfy provisions of the BCA

Clause	Requirement
EP&A Regulations	
136A Compliance with BCA	• All CDCs to include a condition requiring work be carried out in accordance with the requirements of the BCA
Schedule 1 4AA (3)	• All CDCs in B5, B6, B7 zones must be designed (or the design directed) by a qualified designer.

Exclusions (where CDC is not permissible)

Clause	Excludes
Codes SEPP	

1.17A	• development requiring concurrence of a person other than the consent authority or the Director-General of the Department of Environment, Climate Change and Water as referred to in section 4.13(3) of the Act
	• critical habitat
	• wilderness area (Wilderness Act 1987)
	• heritage items (unless an exemption is granted)
	  • land comprising an item listed on the State Heritage Register (Heritage Act 1977)
	  • land subject to an interim heritage order
	  • is identified as an item of environmental heritage or heritage item by an EPI
	• land within an environmentally sensitive area

1.18	• exempt development • development requiring an environment protection license • designated development • land comprising a draft heritage item

1.19 (5)	Specific Exclusions for Industrial and Business Buildings Code:
	• heritage conservation areas or a draft heritage conservation areas,
	• land that is reserved for a public purpose,
	• land on an Acid Sulfate Soils Map as being Class 1 or Class 2, or
	• land that is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997, or
	  • land that is subject to a private land conservation agreement under the Biodiversity Conservation Act 2016 or that is a set aside area under section 60ZC of the Local Land Services Act 2013, or
	• land that is subject to a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995 or a property vegetation plan approved under the Native Vegetation Act 2003,
	• land identified by an environmental planning instrument as being—
	  • within a buffer area, or
	  • within a river front area, or
	  • within an ecologically sensitive area, or
	  • environmentally sensitive land, or
	  • within a protected area, or

Clause	Excludes
1.19 (5) cont.	• land that is identified by an EPI, a DCP or a policy adopted by the council as being or affected by— • a coastline hazard, or • a coastal hazard, or • a coastal erosion hazard, or • land in a foreshore area, or • unsewered land— • to which SEPP (Sydney Drinking Water Catchment) 2011 applies, • in any other drinking water catchment identified in any other EPI
1.19A (e)	development on land that is: • bush fire attack level-40 (BAL-40) • flame zone (BAL-FZ)
5A.6K	development on a flood control lot that is: • flood storage areas • floodway areas • flow paths • high hazard areas • high risk areas
5A.6B(1)	Development must not be carried at premises that are a manufactured home, moveable dwelling, or temporary structure.
5A.6B(5)	Development must not involve developmnent of a kind referred to in EP&A Reg Clause 41(1)(a), (e), (f) Note: EP&A Reg 41(1): (a) an enlarged, expanded, or intensifired existing use (e) an existing commercial use changed to another commercial use (f) an existing light industrial use changed to another light industrial use or commercial use
Local Environment Plans (Standard Instrument) Note: specific LEPs may include additional requirements in Schedule 3	
3.3 Environmentally sensitive areas excluded	Excludes: • coastal waters of the State • a coastal lake • land within coastal wetlands and littoral rainforest area & land within 100m (Coastal Management Act 2016) • aquatic reserves & land within 100m (Fisheries Management Act 1994) • marine parks & land within 100m (Marine Parks Act 1997) • land identified in an EPI as being of high Aboriginal cultural significance or high biodiversity significance • land reserved under the NP&W Act 1974 and land acquired under Part 11 of the NP&W Act 1974 • land reserved or dedicated under the Crown Land Management Act 2016 for the preservation of flora, fauna, geological formations or for other environmental protection purposes, • outstanding biodiversity value (Biodiversity Conservation Act 2016) • critical habitat (Part 7A of Fisheries Management Act 1994)

Permits Required for a CDC

Clause	Permit
Codes SEPP	
1.17A (2)	• CDCs on land comprising heritage items require an exemption under section 57(2), 57(1A) or (3) of the Heritage Act 1977
1.18 (d)	• for on-site effluent disposal system if development is undertaken on unsewered land (if required by Local Gov Act 1993) o for on-site stormwater drainage system (if required by Local Gov Act 1993)
1.18A (e)	• written consent from relevant roads authority (if required under s138 of Roads Act 1993) for building of any kerb, crossover of driveway
1.17A (f)	• for alteration or erection of improvements in a mine subsidence district (Mine Subsidence Compensation Act 1961) from Mine Subsidence Board
1.17A (h)	• for removal or pruning of a tree or other vegetation that requires a permit or development consent
5A.6B (3)	• notice or written advice from the relevant water utility specifying works or other requirements for any water supply or sewerage services as part of the development
Local Environment Plans (Standard Instrument)	
3.2 (3)(c)	• for on-site effluent disposal system if development is undertaken on unsewered land (if required by Local Gov Act 1993)
EP&A Regulations	

Schedule 1 Forms (4AA) Documents to accompany Part 5A applications	Certificate from the roads authority certifying that any impacts on the surrounding road network as a result of the development will be acceptable if specified requirements are met, for:
	• food and drink premises with a GFA of 300m^2 or more,
	• shops or wholesale supplies with a GFA of 500m^2 or more,
	• commercial premises with a GFA of 2,500m^2 or more,
	• industries with a GFA of 5,000m^2 or more,
	• depots or warehouses or distribution centres with a GFA of 8,000m^2 or more,
	• the following land uses involving 50 or more vehicles per hour—
	  • community facilities,
	  • health consulting rooms,
	  • information and education facilities,
	  • medical centres,
	  • storage premises,
	  • vehicle repair stations,
	  • veterinary hospitals,
	• car parks of 50 car parking spaces or more.

Required Plans and Documents

Clause	Provision	
EP&A Regulations		**Detail reqs.**
Schedule 1 Forms - Part 2 Complying Development Certificates (4) (1) Documents to accompany application for complying development certificate	(a) a site plan of the land	*Sched. 1 (4)(2)*
	(b) a sketch of the development	*Sched. 1 (4)(3)*
	(c) if involving a change of use of a building: • the Category 1 fire safety provisions that currently apply to the existing building, • the Category 1 fire safety provisions that apply to the building following its change of use,	
	(d) if involving building work: • a detailed description of the development, and • appropriate building work plans and specifications,	*Sched. 1 (4)(4)* *Sched. 1 (4)(5)*
	(e) if involving building work: • a list of any existing fire safety measures provided in relation to the land or any existing building on the land, and • a list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work,	
	(f) if involving subdivision work, appropriate subdivision work plans and specifications,	*Sched. 1 (4)(6)*
	(f1) if involving the erection of a wall to a boundary that has a wall less than 0.9m from the boundary, a report by a professional engineer, outlining the proposed method of supporting the adjoining wall,	
	(f2) if involving the demolition or removal of a wall to a boundary that has a wall less than 0.9m from the boundary, a report by a professional engineer, outlining the proposed method of maintaining support for the adjoining wall after the demolition or removal,	

Clause	Provision
EP&A Regulations	**Detail reqs.**
	(i) if involving the erection of a temporary structure, the following documents: • documentation that specifies the live and dead loads the temporary structure is designed to meet, • a list of any proposed fire safety measures to be provided in connection with the use of the temporary structure, • in the case of a temporary structure proposed to be used as an entertainment venue—a statement as to how the performance requirements of Part B1 and NSW Part H102 of Volume One of the Building Code of Australia are to be complied with (if an alternative solution, to meet the performance requirements, is to be used), • documentation describing any accredited building product or system sought to be relied on for the purposes of section 85A (4) of the Act, • copies of any compliance certificates to be relied on,
	• (j) in the case of a development involving the use of a building as an entertainment venue or a function centre, pub, registered club or restaurant—a statement that specifies the maximum number of persons proposed to occupy, at any one time, that part of the building to which the use applies.
Schedule 1 Forms - Part 2 Complying Development Certificates (4AA) Documents to accompany Part 5A applications	a document containing information on whether the land on which the development is to be carried out— • is on the list of sites notified under the Contaminated Land Management Act 1997, section 60, or • is used, or was formerly used, for a purpose listed in Managing Land Contamination Planning Guidelines, SEPP 55—Remediation of Land, clause 3.2.1, Table 1, 1998
	A statement by a qualified designer that: • verifies the designer designed, or directed the design of the development • addresses how the design is consistent with the relevant Design Criteria of the BZDG

Design Principles

What is Good Design?

Good design is integral to creating sustainable and liveable communities. As a core planning principle, planners, designers and decision makers should always seek to achieve high quality design outcomes.

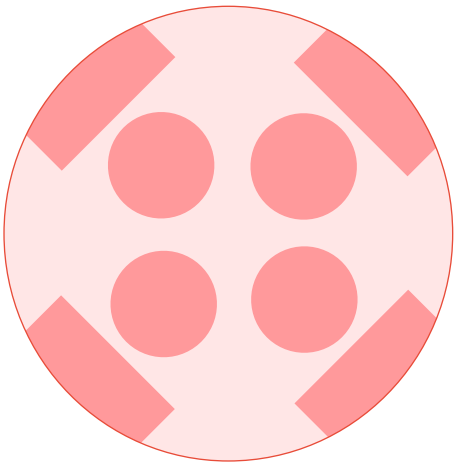
Achieving good design is about creating places and buildings that respond in a creative and practical way to enhance the function and identity of a place.

The promotion of 'good design' is an objective The Environmental Planning and Assessment Act 1979.

This guide seeks to ensure that the identified development under the code achieves good design, consistent with the aims of the guide.

Design Principles

Five Design Principles underpin the objectives of the Code. These Design Principles are a recognised means of verifying design quality and ensure the development carried out under this guide can be responsive to local character and place, integrated, and resilient.



PRINCIPLE 1

PLACE AND CONTEXT

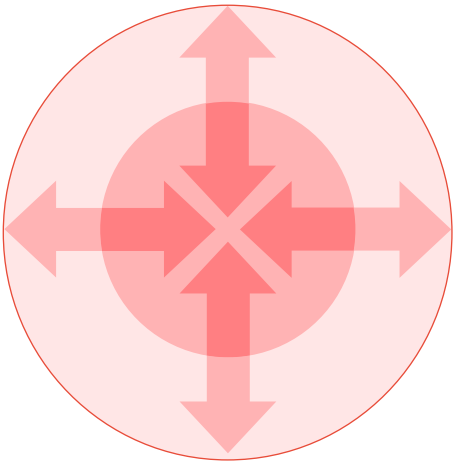
Deliver inviting public spaces and enhances public life to create engaged communities.

Buildings should respond to the existing or desired future culture, character, and heritage of their local area.

New developments should demonstrate their understanding of and response to Country, and acknowledge contributions from Traditional Custodians and or Knowledge Holders.

New developments in business zones have the opportunity to make a positive contribution to their local area and to influence the future growth of the local area through considered design decisions.

The interface of the development site with the public domain is an opportunity to make equitable areas of public amenity, through landscaping, shade, pedestrian paths, active ground floor uses, and welcoming entries.



PRINCIPLE 2

INTEGRATION AND CONNECTION

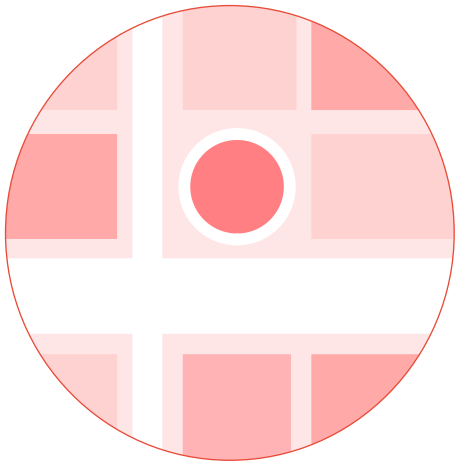
Promote productive and connected places to enable communities to thrive.

Business zone developments drive employment and commerce. They support local centres and complement other businesses to create productive environments. They must be welcoming, equitable and inclusive.

Where possible developments under this code should contribute to the changing nature of employment centres and business parks, as they diversify from single use areas. They are increasingly mixed use, offering a diverse range of services and facilities, for employment, recreation, and well-being.

Developments in business zones should be integrated with and connect to local social infrastructure, and active and public transport networks to support a well connected business zone.

Developments provide safe places for occupants, visitors, and passers by, incorporating the principles of Crime prevention through environmental design (CPTED).



PRINCIPLE 3

AESTHETICS AND APPEARANCE

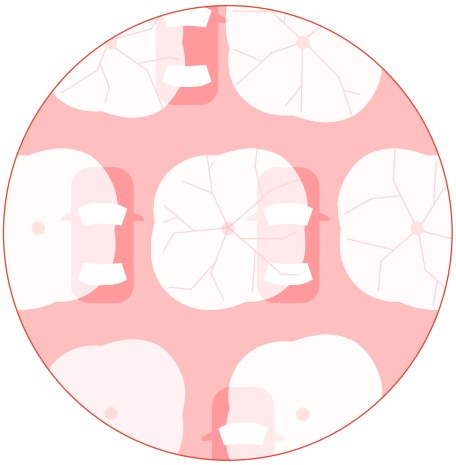
Deliver beauty and amenity to create a sense of belonging for the people

Business zone developments make an important contribution to the urban environment. They are located in prominent locations on main roads, in urban areas, and adjoining residential neighbourhoods.

They are places of work for employees, provide key services, and are retail destinations for customers. A well designed building will make a positive contribution to the daily lives of these people.

Through careful site planning, landscaping, and the considered design of the built form, good design, and places with beauty and character can be made within the commercial and urban constraints often encountered within areas zoned B5-B7.

The built form should exhibit good proportions and a balanced composition of elements that reflects the building's use, its structure, and internal planning.



PRINCIPLE 4

GREENING THE GREY

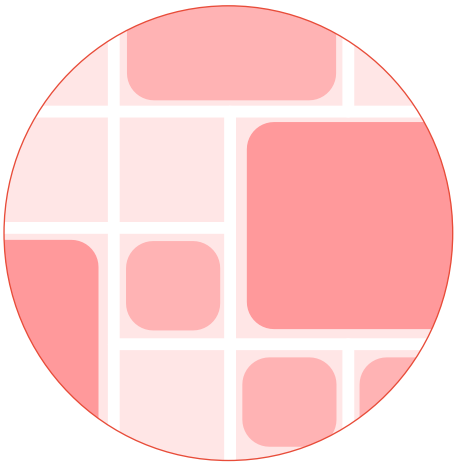
Deliver sustainable and greener places to ensure the well-being of people and the environment

Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.

Developments in business zones must incorporate meaningful landscaped areas that address the urban heat island effect, and support and regenerate local microclimates.

Landscaped areas provide a buffer to sometimes tough urban environments, and support the physical and mental health of employees and workers.

Good design of Business zone developments incorporates passive environmental measures to reduce energy usage and ongoing maintenance and operational costs.



PRINCIPLE 5

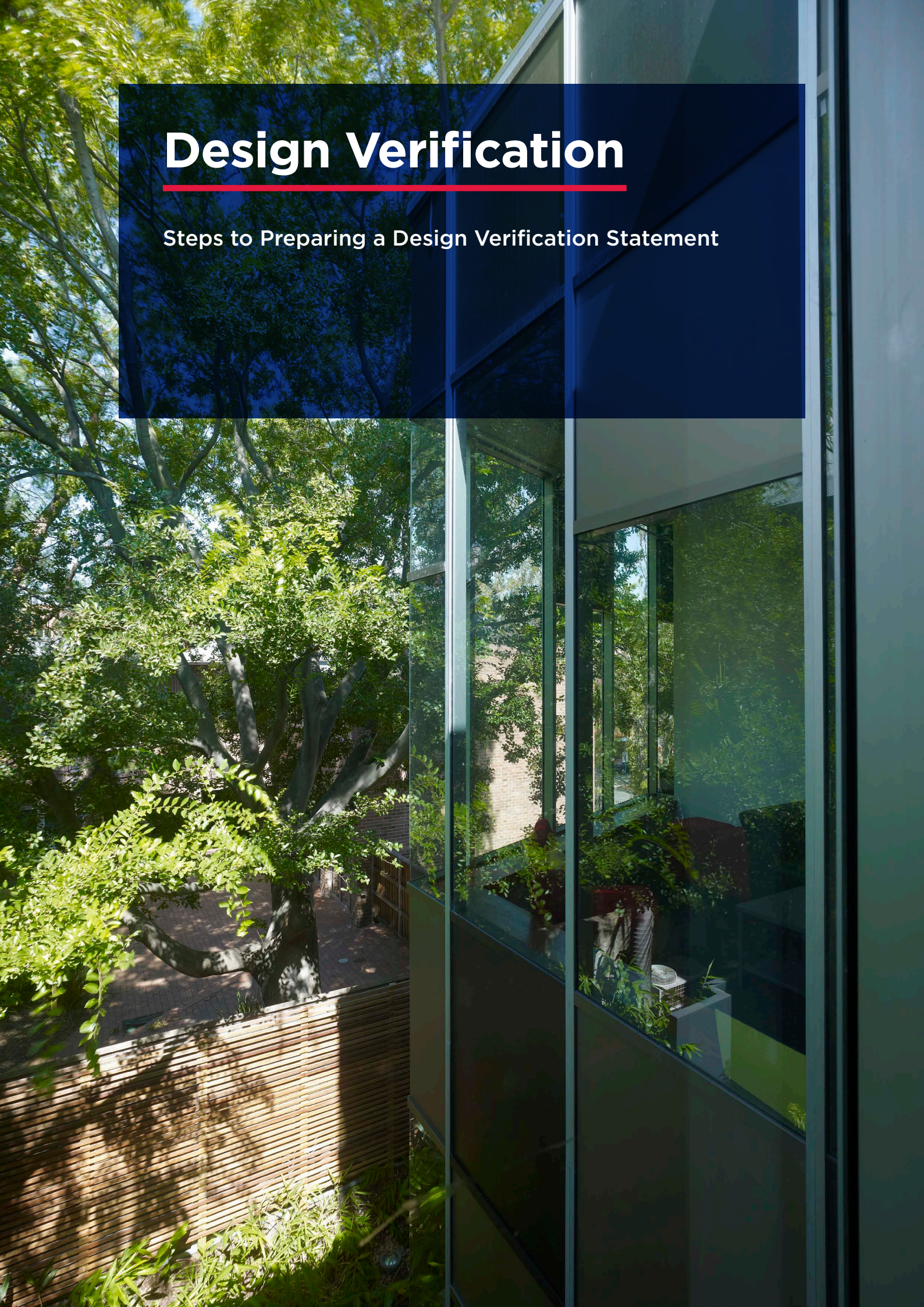
RESILIENT BUILDINGS

Deliver resilient, diverse places for enduring communities

The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments.

Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to change. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.

Adaptability and good design principles will help to future proof sites and buildings so that they may be adapted for new uses as they arise.



Design Verification

Steps to Preparing a Design Verification Statement

The Design Verification Process

In order for a development to be Complying Development under the Codes SEPP, the development must satisfy the Development Standards, and the Design Criteria.

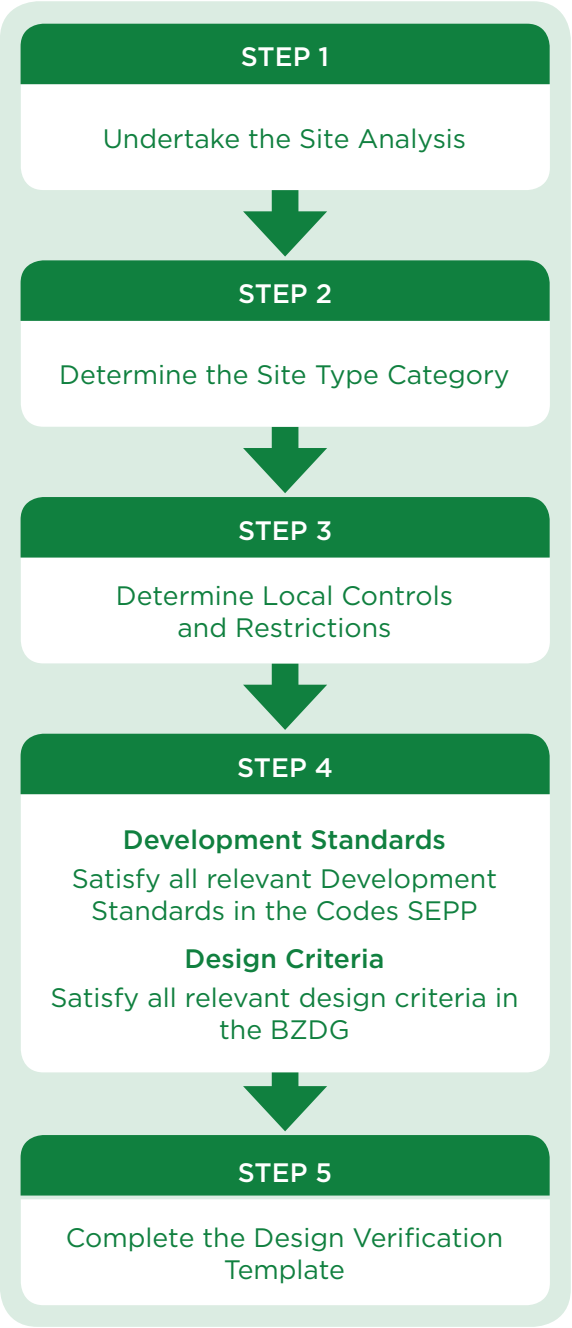
A Design Verification Statement (DVS) is required to be completed and included with the CDC application.

The steps to preparing a Design Verification are:

Step 1: Site Analysis.
Step 2: Determine the Site Type
Step 3: Determine Local Controls and Restrictions
Step 4: Satisfy all Design Criteria
Step 5: Prepare the Design Verification Statement

The tables on the following pages describe these requirements in detail. A template for the Design Verification Statement is included in the Appendices.

Confirm that Complying Development is permissible on the subject site prior to undertaking the Design Verification Process.



Step 1: Site Analysis

Site Analysis

A detailed site analysis must be prepared at the beginning of the design process. The analysis identifies the unique and specific qualities and attributes of the subject site.

The Site Analysis will identify the opportunities and constraints of the site and the wider area. This should be undertaken at the local, neighbourhood and streetscape, and site scale to understand how the development responds to the context at the varying scales.

A development will need to respond to the **desired future character** of an area. Councils often establish the desired future character of an area through consultation with community, industry and other key stakeholders. These can take the form of Character Areas, Precinct Plans, Development Control Plans or master plans.

Some business zoned areas contain a mix of uses, built form, and characters. The proposed development must respond to these varied conditions in a sympathetic manner to retain and reinforce the local character of the area.

A detailed understanding of the overall site context is the starting point of designing an appropriate response to place. Responding to place not only considers the physical elements that comprise of the context such as natural and built features, but also indigenous, social, economic and environmental factors.

Connecting with Country

All projects must consider their place in broad continuum of the site. Connecting with Country is a response to Indigenous concepts of Country, taking a holistic and Country-led approach to the built environment, guided by Aboriginal people. It considers how design and planning processes are related to natural systems and elements including the land, water, air, plants, animals and humans.

Complete the Site Analysis Checklist in Appendix A: Design Verification Templates

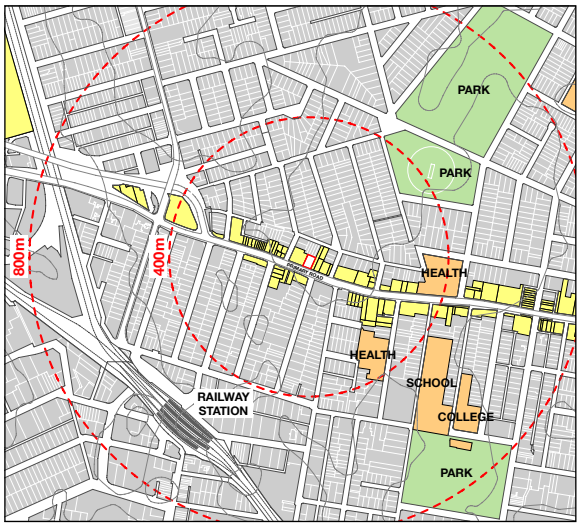


FIG. 3A.1
Example of a Local Scale drawing.

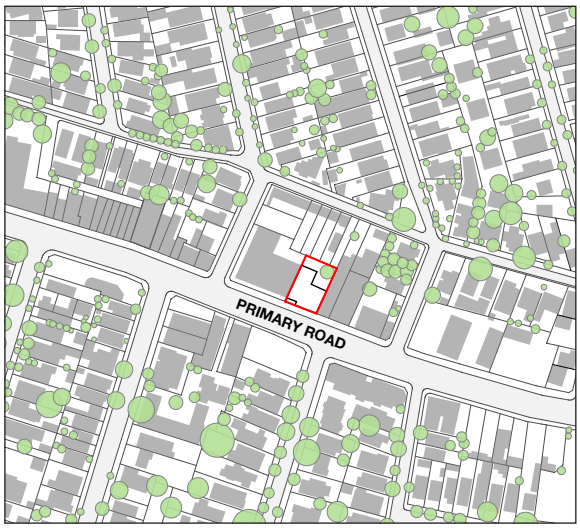


FIG. 3A.2
Example of a Neighbourhood and Streetscape Scale drawing.

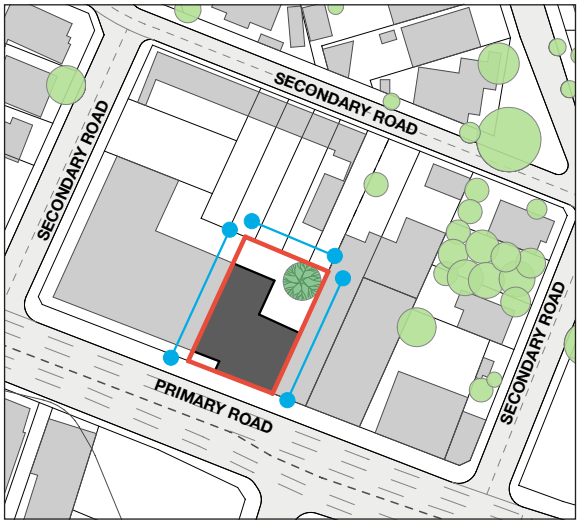


FIG. 3A.3
Example of a Site Scale drawing.

Step 2: Site Category Types

Development sites within B5-B7 zones broadly fit into one of two categories:

- Free Standing Sites
- Infill Sites

The characteristics of these two categories lead to very different urban typologies, and this is reflected in the Design Criteria. This categorisation is primarily determined by the predominant side setbacks within the urban block that the site is located on.

Blocks with predominantly zero setbacks at side boundaries are generally **Infill Sites**.

Blocks with multiple buildings that have side setbacks on both sides of the lot, or large setbacks to one side boundary, are generally **Free standing Sites**.

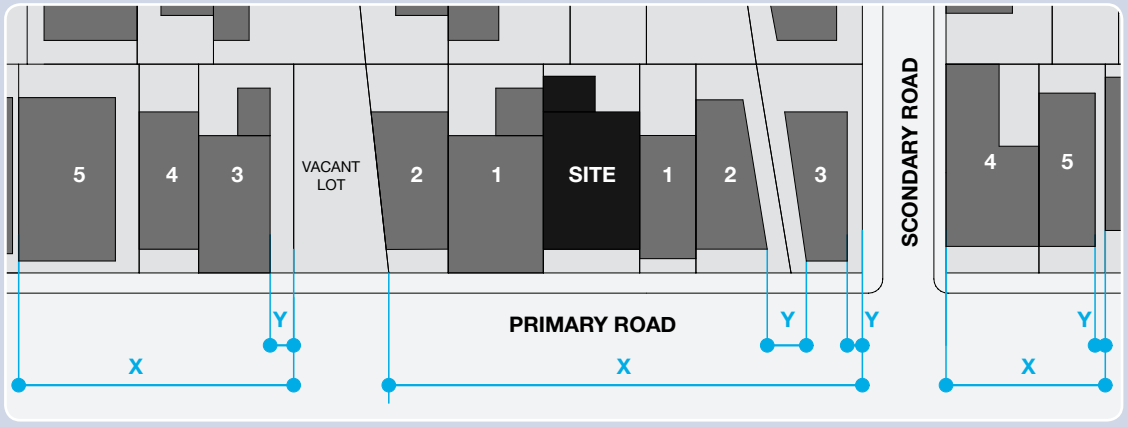
Site Category Type is certified as Free Standing or Infill by the private certifier.

Determining Site Category

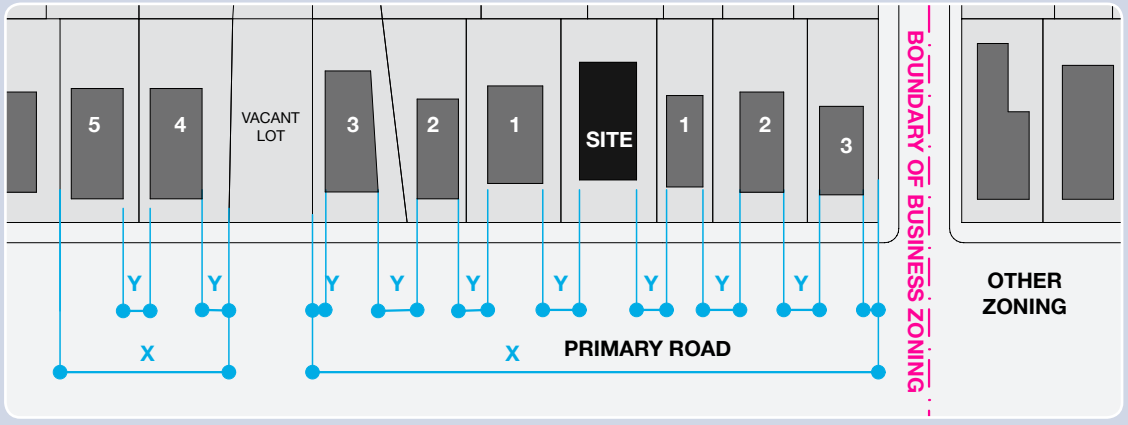
Clause 5A.20B (9) - Details the development standards for determining the site category.
Measure the length of the 5 lots to either side of the site (X)

Determine the sum of the side setbacks for those lots (Y)

Infill Site calculation: Total Y ÷ Total X = Less than 15%



Free Standing Site calculation: Total Y ÷ Total X = Greater than 15%



Note:

- Count 5 lots to either side, including over secondary roads (do not include road width)
- Do not include vacant lots when counting the 5 lots to either side
- Do not cross over land zoning boundaries when when counting lots

Step 3: Determine Local Controls and Restrictions

Refer to the relevant LEP for the site and determine the statutory controls that apply.

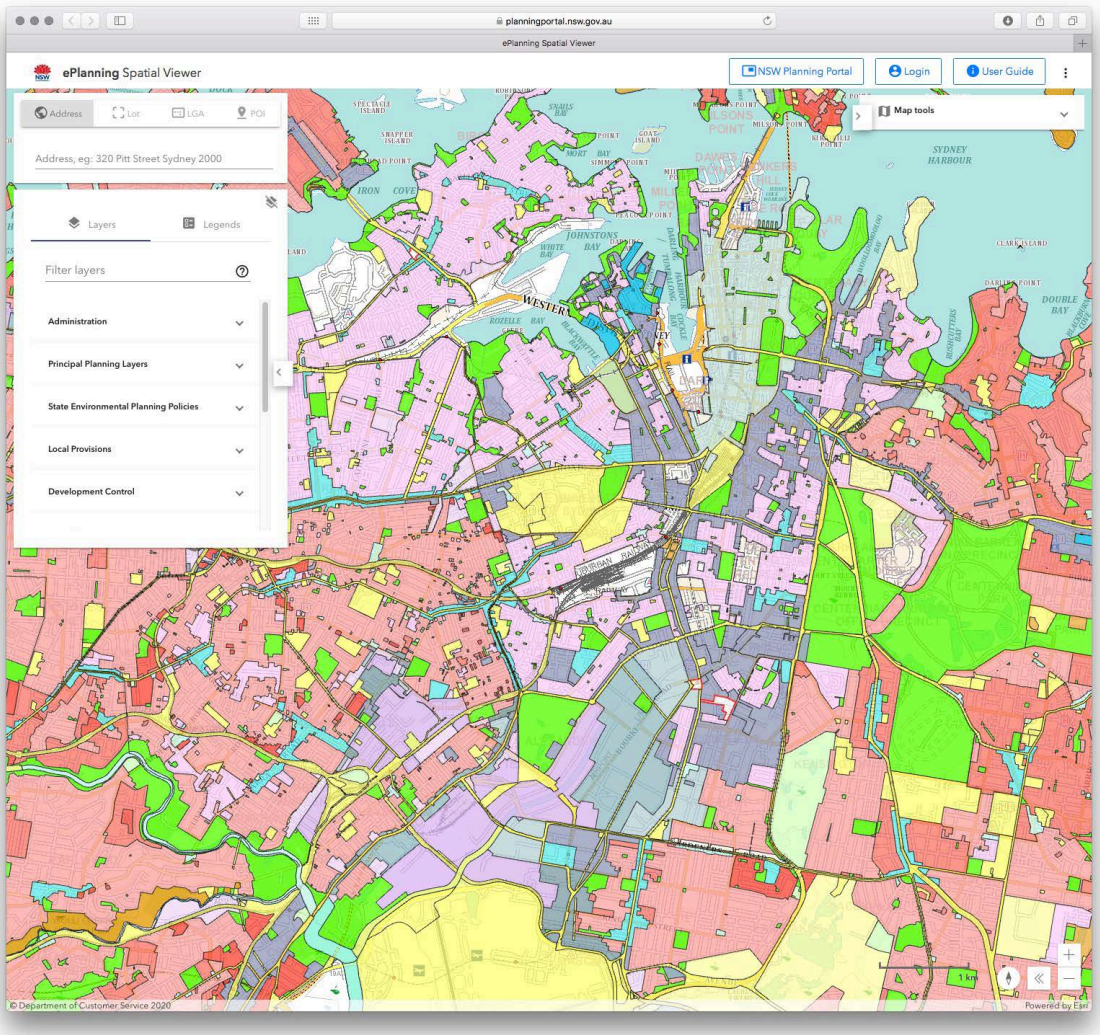
Principal development standards include:

- 4.3 Height of buildings
- 4.4 Floor space ratio
- 4.6 Exceptions to development standards for certain types of developments.

Determine relevant DCP codes that apply. Including:

- Maximum or minimum parking rates
- Landscaping controls
- Local area character statements

The Planning Portal provides mapping, planning layers, and the option to generate a Property Report listing all applicable planning controls from the LEP.



Step 4: The Design Criteria

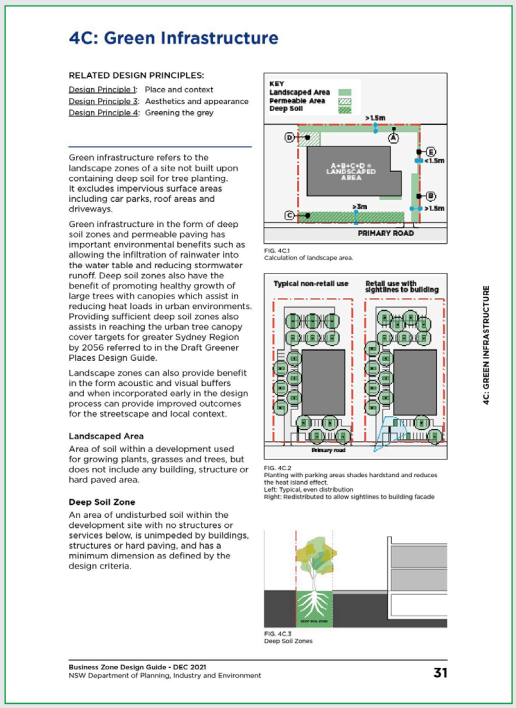
Design Criteria Structure

The Design Criteria section sets out the design objectives and the specific criteria required to be satisfied and verified for a Complying Development.

Each sub-section of the Design Criteria includes:

A description of the section including:

- The relevant Design Principles,
- An explanation of the background and rationale behind the objectives and criteria,
- Explanatory diagrams describing specific aspects of the design criteria,



4C: Green Infrastructure

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 3: Aesthetics and appearance
Design Principle 4: Greening the grey

Green infrastructure refers to the landscape zones of a site not built upon containing deep soil for tree planting. It excludes impervious surface areas including car parks, roof areas and driveways.

Green infrastructure in the form of deep soil zones and permeable paving has important environmental benefits such as allowing the infiltration of rainwater into the water table and reducing stormwater runoff. Deep soil zones also have the benefit of promoting healthy growth of large trees with canopies which assist in reducing heat loads in urban environments. Providing sufficient deep soil zones also assists in reaching the urban tree canopy cover targets for greater Sydney Region by 2056 referred to in the Draft Greener Places Design Guide.

Landscape zones can also provide benefit in the form acoustic and visual buffers and when incorporated early in the design process can provide improved outcomes for the streetscape and local context.

Landscaped Area
Area of soil within a development used for growing plants, grasses and trees, but does not include any building, structure or hard paved area.

Deep Soil Zone
An area of undisturbed soil within the development site with no structures or services below, is unimpeded by buildings, structures or hard paving, and has a minimum dimension as defined by the design criteria.

KEY
Landscaped Area
Permeable Area
Deep Soil

PRIMARY ROAD

FIG. 4C.1
Calculation of landscape area.

Typical non-retail use
Retail use with sightlines to building

FIG. 4C.2
Planting with parking areas shades hardstand and reduces the heat island effect.
Left: Typical, even distribution
Right: Redistributed to allow sightlines to building facade

FIG. 4C.3
Deep Soil Zones

4C: GREEN INFRASTRUCTURE

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Development Standards

Development Standards as contained the Codes SEPP are outlined within the grey tables

The Design Criteria Table including:

Objectives

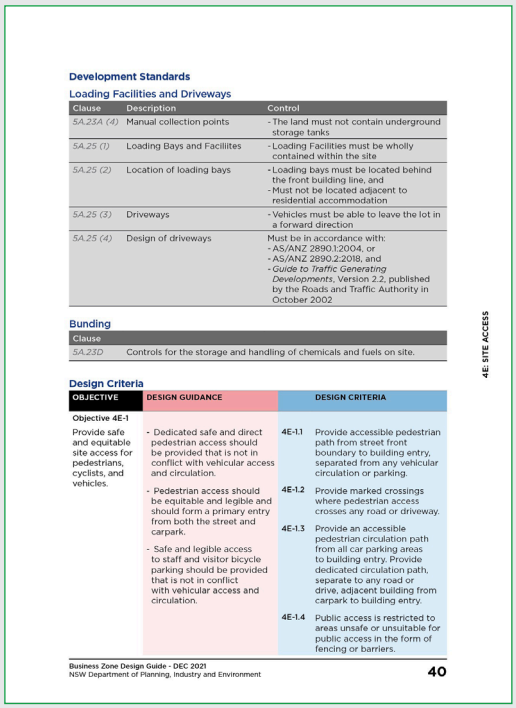
The desired outcomes, directly related to the Design Principles.

Design Guidance

How the objectives may be met through the design of the development.

Design Criteria

Measurable standards that are deemed to meet the Objective. The Design Criteria must be satisfied in order to obtain a CDC.



Development Standards

Loading Facilities and Driveways

Clause	Description	Control
5A.23A (4)	Manual collection points	- The land must not contain underground storage tanks
5A.25 (1)	Loading Bays and Facilities	- Loading Facilities must be wholly contained within the site
5A.25 (2)	Location of loading bays	- Loading bays must be located behind the front building line, and - Must not be located adjacent to residential accommodation
5A.25 (3)	Driveways	- Vehicles must be able to leave the lot in a forward direction
5A.25 (4)	Design of driveways	Must be in accordance with: - AS/ANZ 2890.1:2004, or - AS/ANZ 2890.2:2018, and - *Guide to Traffic Generating Developments*, Version 2.2, published by the Roads and Traffic Authority in October 2002

Bunding

Clause	
5A.23D	Controls for the storage and handling of chemicals and fuels on site.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4E-1			
Provide safe and equitable site access for pedestrians, cyclists, and vehicles.	- Dedicated safe and direct pedestrian access should be provided that is not in conflict with vehicular access and circulation. - Pedestrian access should be equitable and legible and should form a primary entry from both the street and carpark. - Safe and legible access to staff and visitor bicycle parking should be provided that is not in conflict with vehicular access and circulation.	4E-1.1	Provide accessible pedestrian path from street front boundary to building entry, separated from any vehicular circulation or parking.
		4E-1.2	Provide marked crossings where pedestrian access crosses any road or driveway.
		4E-1.3	Provide an accessible pedestrian circulation path from all car parking areas to building entry. Provide dedicated circulation path, separate to any road or drive, adjacent building from carpark to building entry.
		4E-1.4	Public access is restricted to areas unsafe or unsuitable for public access in the form of fencing or barriers.

4E: SITE ACCESS

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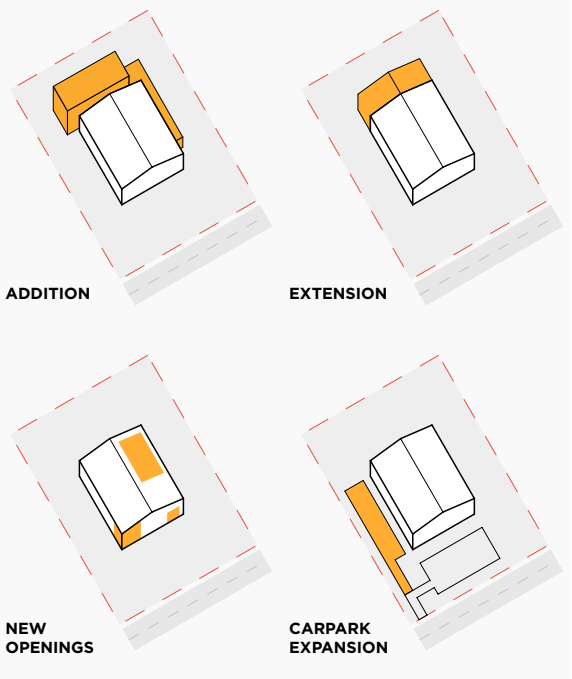
Alterations and Additions

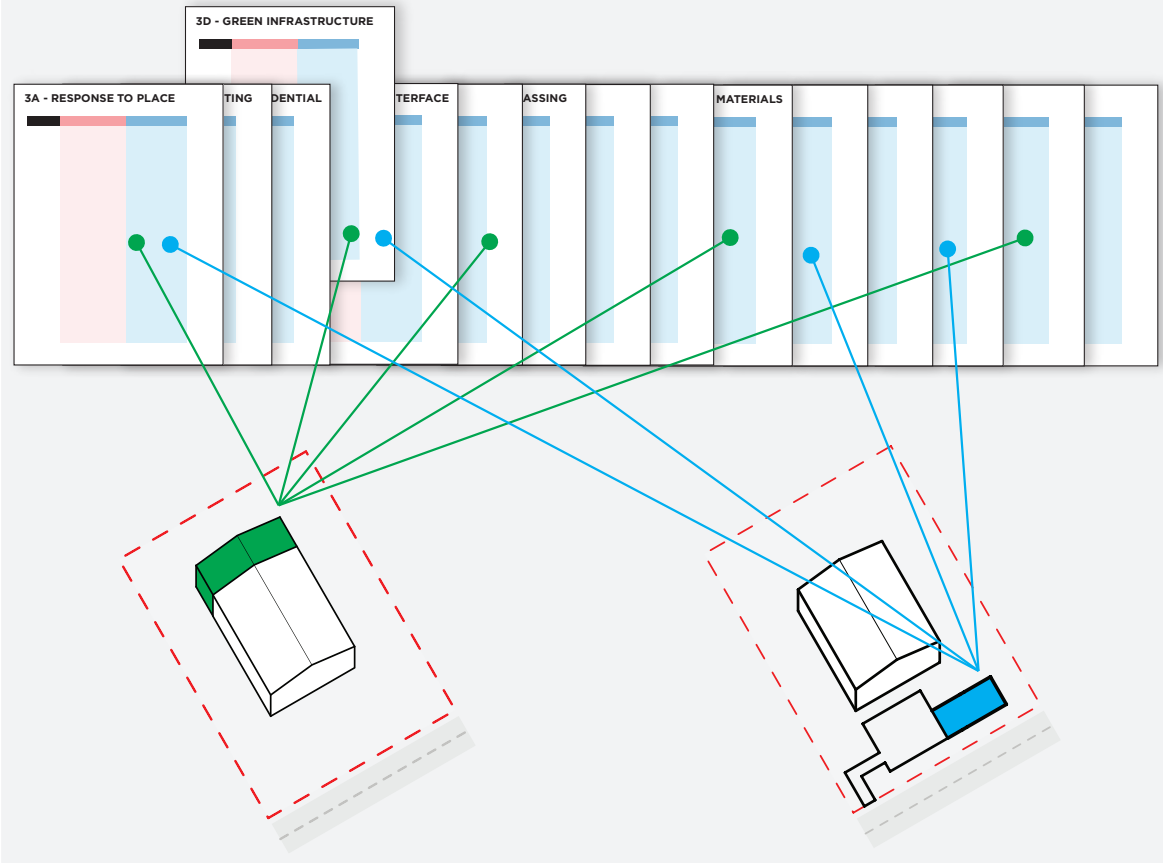
Alterations and additions to existing buildings in B5, B6, B7 zones may be undertaken as complying development and must comply with the BZDG.

- All new works are to comply with the relevant Design Criteria, even if existing buildings are inconsistent with the criteria.
- In the case of alterations or additions, only the Design Criteria relevant to the alteration apply
- The development standards relate to the lot as a whole, including all existing structures. For example the total of the new and existing floorspace must not exceed the max permissible floorspace.

Alterations and additions may vary in scale and form, ranging from building extensions, new parking areas, landscaping, and new openings.



NEW WORKS ARE TO COMPLY WITH THE RELEVANT DESIGN CRITERIA



Relationship to the Design Principles

The Design Criteria are divided into to the following sections:

1. Urban Design and Site Planning

How the development sits within the public domain and the local context. How it sits on the site and the overall envelope controls that describe the permissible development volume.

2. Designing the Development

The parameters that define the design of the development including external spaces and functions, and the building design.

3. Environmental Performance

The performance of the development, including its environmental impacts and the site servicing.

This matrix describes the relationship between the Design Criteria and the Design Principles, and where they interact.

			PRINCIPLE 1 PLACE AND CONTEXT	**PRINCIPLE 2** INTEGRATION AND CONNECTION	**PRINCIPLE 3** AESTHETICS AND APPEARANCE	**PRINCIPLE 4** GREENING THE GREY	**PRINCIPLE 5** RESILIENT BUILDINGS
1	4A	ORIENTATION AND SITING	■	■	■		
	4B	SITES ADJOINING RESIDENTIAL				■	■
	4C	GREEN INFRASTRUCTURE	■		■	■	
	4D	PUBLIC DOMAIN INFRASTRUCTURE	■	■			
2	4E	SITE ACCESS	■	■			
	4F	BUILT FORM AND MASSING			■		■
	4G	PARKING	■	■		■	
	4H	AMENITY		■	■	■	■
	4I	APPEARANCE AND MATERIALS	■		■		■
3	4J	WATER				■	
	4K	WASTE		■	■	■	

4A: Orientation and Siting

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 2: Integration and connection
Design Principle 3: Aesthetics and appearance

Response to Place

The proposed development must respond to the particular characteristics and qualities of the site through the site planning, urban design, and architectcural response.

The Site Analysis undertaken in Step 1 provides the framework for an appropriate response to place.

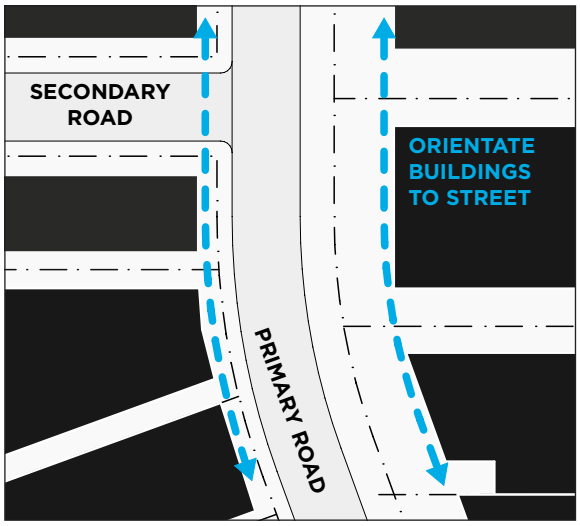


FIG. 4A.1
Buildings are orientated to the street.

Orientation

Orientation refers to the position of a building and its internal spaces in relation to the site, the street, the subdivision layout, and neighbouring buildings.

Orientation influences the urban form of the street and the character of the local area. Orientation and siting also affects the amenity of the occupants of the building through access to daylight, the location of landscaping, outlook, and visual and acoustic privacy.

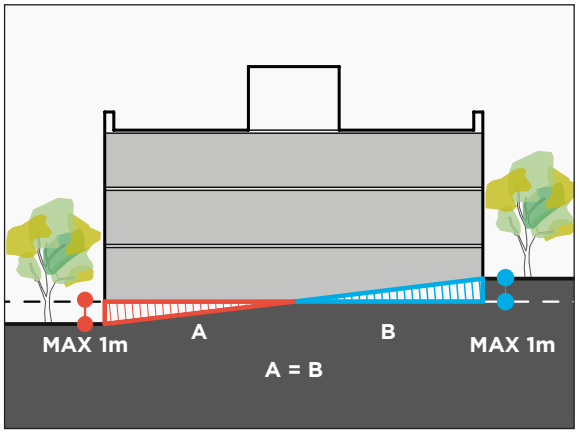


FIG. 4A.2
Cut and Fill should be balanced as closely as possible.

Excavation

The orientation and site planning will affect the amount of cut and fill as a result of the ground works. Where possible buildings and landscaping should be designed so that cut and fill are balanced, reducing waste and construction costs.

The site planning must be developed so that there is no excavation that will affect existing significant and protected trees.

Multi-use Lots

For Multi-use Lot with multiple buildings, new or existing buildings on the site, the placement of new built form must consider the relationship of each building to the others on the site, as well as to the surrounding context.

The space between buildings is to be considered as positive open space and designed with the same level of care as the built form.

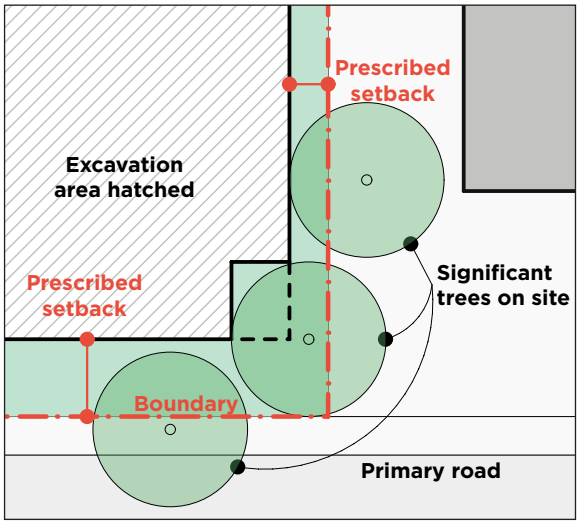


FIG. 4A.3
No excavation within setbacks or below new or retained trees

Setbacks

Setbacks govern the distance of a building from property boundaries. Setbacks vary according to a building's context and are a means of reinforcing or establishing the character of an area.

The setbacks in this Guide are predominately **maximum** setbacks in order to encourage developments to address the primary frontage and to minimise the amount of hardstand and parking area in front of the building line. These maximum setbacks work in conjunction with the predominant setback line as established through Step 1 Site Analysis.

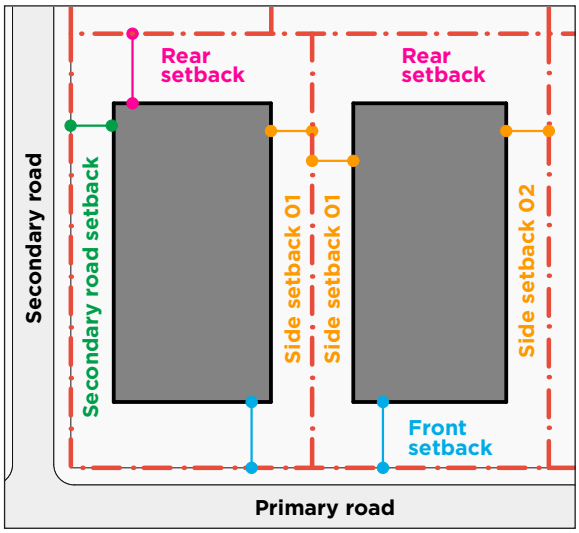


FIG. 4A.4
Site Setbacks.

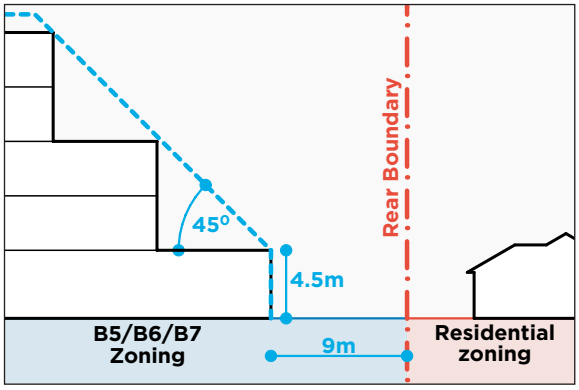


FIG. 4A.5
Setbacks at rear boundaries with residential zones

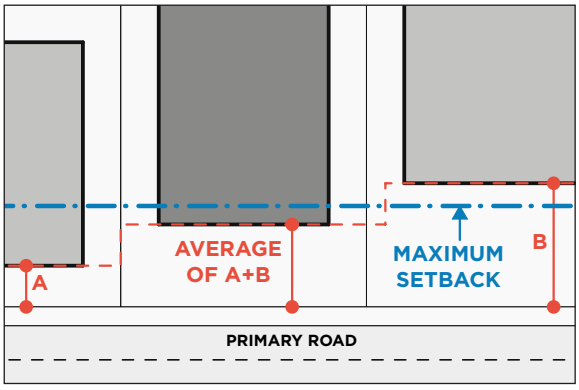


FIG. 4A.6
Primary Road Setback.

Noise

Sites within the subject zones are commonly located near major roads, rail lines, beneath flight paths or near industrial areas which have noise and air quality implications. Similarly land use within the subject zones can also have potential noise and pollution impacts on the adjoining public and private domain.

Incorporation of noise and pollution design considerations can help improve the amenity not only for the buildings users but also the surrounding context.

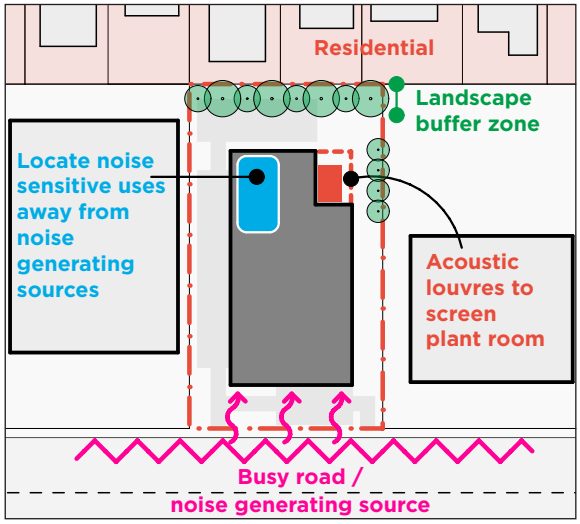


FIG. 4A.7
Site planning in response to internal and external noise constraints.

Development Standards in Codes SEPP

Setbacks

Clause	Description	Control
5A.22 (1)	Minimum boundary setback to classified road	- as specified under another EPI, or - if none specified, 3m
5A.22 (2)	Minimum boundary setback where the lot is subject to a proposed future road widening (after acquisition)	- 10m if the widening is for a local road - 3m if the road widening is for a classified road widening, a future classified road widening or a local road future classified road
5A.22 (3)	Setbacks to boundaries shared with residential uses, where the residential uses are within 3m of the boundary.	- 1.5m setback up to 3m in height[1] - 3m setback from 3m - 6m in height - 4.5m setback above 6m in height
5A.22 (5)	Setback to boundary with a railway corridor	- 2m

1. Does not apply if ground floor uses of adjoining lot do not include residential uses along the shared boundary (Clause 5A.22(4)).
2. 5A.22 (1-5) do not apply to existing parts of a building that are being altered or added to (Clause 5A.22(6))

Earthworks

Clause	Description	Control
5A.6H (1)	**Excavation**	
(b)	Land in Class 3 or 4 on the Acid Sulfate Soils Map	- 1m - Maximum depth of excavation below existing ground level
(c)	Land not in Class 3 or 4 on the Acid Sulfate Soils Map	- Site area <10,000m^2: 3m - max depth of excavation below existing ground level - Site area >10,000m^2: 6m - max depth of excavation below existing ground level
(d)	Setback of excavation near any natural waterbody	- 40m
(e)		- No building over a registered easement
(f)	Excavation near rail corridors	- 3m setback from any rail corridor
5A.6H (2)	**Fill**	
(a)	Maximum fill	Fill must not raise the existing ground level by more than: - Site area <10,000m^2: 2m - Site area >10,000m^2: 7m
(c)	Setback of fill near any natural waterbody	- 40m

Other relevant Development Standards

Clause	Description
5A.6J	Development standards for bush fire prone land
5A.6K	Complying development of flood control lots

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4A-1		
Setbacks are established by the context and established urban form. Maximum setbacks ensure built form engages with the public domain.	- Street setbacks should be limited to reinforce street edges and corners and establish desired future character of the street and area. - Rear setbacks are to be provided to provide separation to adjoining lots and provide opportunity for landscaped zones.	**4A-1.1** Setback controls: **Free Standing Sites** - Primary road: Max 21m - Secondary road: Max 21m - Site Setback 1: Max 21m - Site Setback 2: Max 21m - Rear Setback: Min 9m **Infill Sites** - Primary road: Max 21m - Secondary road: Max 21m - Site Setback 1: Max 21m - Site Setback 2: Max 21m - Rear Setback: Min 9m **Rear Setbacks adjoining residential uses** - Up to 4.5m height: Min 9m - 4.5m+ height. 45 degree height plane (See Fig 4A.5)
Objective 4A-2		
Buildings are oriented to the street and boundaries, to urban edges, and provide consistent orientation within precincts.	- Buildings should be oriented reinforce the street edge and existing urban form. - Where neighbouring developments align with the desired future character as defined by the controls, developments should respond to existing established setbacks.	**4A-2.1** Buildings are oriented to the street, and the principal form follows the boundary orientation. **4A-2.2** Buildings must align with the predominant established built form alignments, or align to the average of the adjacent setbacks.
Objective 4A-3		
Buildings and sites are designed to preserve the amenity of adjacent public open spaces.	- Site planning should consider the aspect of the site (north, south, east and west orientation), how this affects daylight access and potential overshadowing of public open spaces, streets, and uses. - Public open spaces include: public parks, plazas, forums, gardens, playgrounds, riverbanks and waterfronts, playing fields and courts, publicly accessible bushland, and the like, and exclude public streets and footpaths.	**4A-3.1** - Developments must not reduce the total area of public open space that receives direct sunlight between 9am to 3pm on June 21 to less than 50% of the site area of that public open space. - Where the area of public open spaces is already less than 50%, new developments must not increase the amount of overshadowing of that space between 9am and 3pm on June 21.

OBJECTIVE	DESIGN GUIDANCE		DESIGN CRITERIA
	- Site planning and landscape design should not include blind corners or concealed entries.	**4A-3.2**	The building and urban design does not include any blind corners or alcoves that may facilitate concealment or hiding.
Objective 4A-4 Building siting and orientation responds to the site topography to minimise cut and fill, and the extent of retaining walls where possible.	- On sloping sites, the site planning and building design should consider the natural slope of the site. - Orient buildings along contour lines to minimise level changes, excavation, and retaining walls. - Where possible cut and fill is balanced to minimise the import or export of fill.	**4A-4.1** **4A-4.2**	The ground floor: - Is not more than 1m above ground level on a flat site - For sloping sites, is not more than 1m above ground level at the lower end of the slope, and no more than 1m below ground level at the upper end of the slope. - Buildings step down with the site slope.
Objective 4A-5 Site planning minimises the impact on existing vegetation.	- To protect existing vegetation, excavation or the construction of sub surface spaces should not take place within areas that may disturb the root systems of trees on public land, neighbouring properties, and any trees required to be protected on the subject site.	**4A-5.1**	Excavation and basement uses, including any carparking, must not be provided: - within the prescribed setback areas, - within the drip line of any significant trees marked for retention or under a Tree Protection Order, on the subject site, neighbouring properties, or public land

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4A-6		
Sites with multiple buildings or uses are considered as a whole	- Where there are existing buildings and structures on the site that are to be retained, they should be included in the site planning. - Spaces between buildings are seen as positive open spaces and should receive the same amount of design care as the built form. - Where different land uses are co-located on a site, the specific design requirements for each needs to be considered. For example, Service vehicles and loading requirements for an industrial use must be kept separated from a co-located retail use.	**4A-6.1** Open spaces between buildings include part of the required landscaped area. **4A-6.2** Where separation between users is required on sites with co-located uses, it is managed through landscaping and landscaped areas. **4A-6.3** Service areas (eg. waste areas, loading, meters etc) are co-located where permissible.
Objective 4A-7		
Site planning minimises the impact of noise from the development on the local context	- It is far more cost effective to install appropriate noise insulation at the design stage, rather than retrofitting it later to a finished building. - Consider landscape design as a means of reducing the perception of noise and a filter for air pollution.	**4A-7.1** - Noise generating sources must be located, orientated and designed to avoid adversely effecting the local context. - Within a development, provide physical separation between noise generating sources and building uses that would be negatively affected.

4B: Sites Adjoining Residential

RELATED DESIGN PRINCIPLES:

Design Principle 4: Greening the grey

Design Principle 5: Resilient buildings

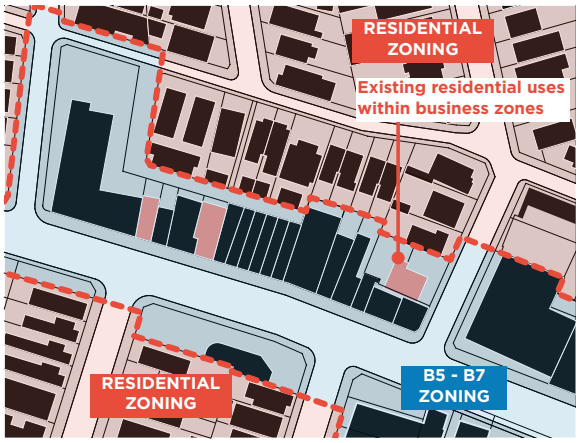


FIG. 4B.1
Example location where Business Zoning adjoins Residential Zoning.

Business Zones adjoining Residential Zones

Business Development, Enterprise Corridor, and Business Park Zones are often located adjacent to Residential and Mixed Use zones. Commercial developments in these locations should be good neighbours and consider the impact of any new development on nearby residential uses.

Traditionally, business hours of operation did not typically overlap with time spent in the home. However, with an increase in the number of people working from home, flexible working hours, shift work, and non-traditional working arrangements, there is an increasing overlap between these uses.

Where the B5-B7 zones adjoin residential zones, commercial developments should consider the amenity of residential homes and open spaces. Site planning and building design should be undertaken to minimise impacts on:

- Solar access and daylight to living areas and private open spaces
- Visual privacy and overlooking
- Acoustic privacy
- Built form and massing

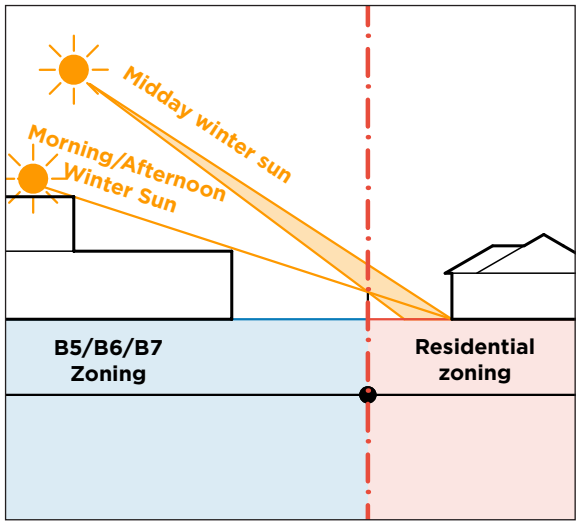


FIG. 4B.2
Building height and form designed to note overshadow neighbouring residential.

Business Zones with Residential uses

In many cases, particularly in established inner city areas, there may be existing residential uses permeating B5, B6, and B7 zones.

Where development under this guide is proposed, the development must be designed to protect the amenity of residential neighbours.

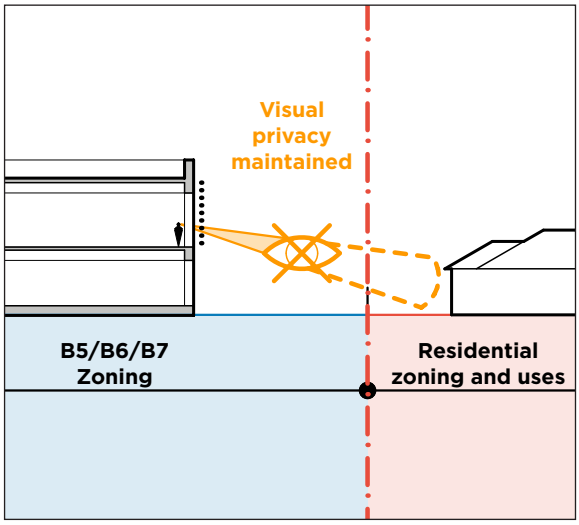


FIG. 4B.3
Where openings overlook residential uses, they are to be screened to maintain privacy.

Development Standards in Codes SEPP

Privacy

Clause 5A.23

Clause	Description	Control
5A.23	Windows in walls facing residential uses that are 0-6m from the shared boundary	- Privacy screens to any part of the window less than 1.5m above finished floor level

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4B-1 Built form is arranged and sited to minimise impacts on neighbouring residential uses.	- Adjoining residential uses should be studied, surveyed and drawn to scale, noting private outdoor areas, windows and opening, and building footprints. - The proposed development should be positioned and oriented on the site to minimise the impact on residential areas and uses. - The built form and massing of commercial buildings should transition in scale from the from the commercial context, down to the residential scale.	**4B-1.1** **4B-1.2**	Site planning is arranged so that windows and communal open spaces (balconies etc) do not located to not overlook from residential uses, and Where the site adjoins residential uses at the rear boundary the built form steps down in scale toward the boundary shared with residential uses
Objective 4B-2 Development should not reduce the existing Solar Access of neighbouring residential areas.	- Prepare shadow studies to understand the overshadowing impacts of the proposed development on residential areas. - Design the built form envelope to retain solar access to living areas and private open space of residential areas.	**4B-2.1**	Retain direct solar access to habitable rooms and private open spaces of neighbouring residential uses for: - a minimum of 2hrs between 9am - 3pm on 21st June. Direct Solar access is defined as a minimum of 1sqm at 1m above the FFL receiving the full 2hrs of daylight.

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4B-3 Acoustic Privacy - Noise transfer to neighbouring residential uses is minimised through the siting of buildings and building layout.	- Noise generating uses should be located away from residential areas, and screened with appropriate acoustic treatment to bring noise levels within approved levels.	**4B-3.1** Noise generating uses are acoustically screened and located away from residential uses.
Objective 4B-4 Visual Privacy of neighbouring residential areas is maintained through the orientation and siting of the building, and where required, screening.	- Buildings should be oriented on the site to minimise opportunities for overlooking of residential living areas, and private outdoor space. - Where overlooking is unavoidable, openings that enable a view to private areas should be treated to maintain the privacy of residential areas. Options may include; angling openings to orient the view elsewhere, using obscure glazing to lower portions of windows, fixed external louvres.	**4B-4.1** Unscreened openings are located on walls not facing residential uses. **4B-4.2** Privacy screens are consistent with, and integrated into, the design of the building

4C: Green Infrastructure

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 3: Aesthetics and appearance
Design Principle 4: Greening the grey

Green infrastructure refers to the landscape zones of a site not built upon containing deep soil for tree planting. It excludes impervious surface areas including car parks, roof areas and driveways.

Green infrastructure in the form of deep soil zones and permeable paving has important environmental benefits such as allowing the infiltration of rainwater into the water table and reducing stormwater runoff. Deep soil zones also have the benefit of promoting healthy growth of large trees with canopies which assist in reducing heat loads in urban environments. Providing sufficient deep soil zones also assists in reaching the urban tree canopy cover targets for greater Sydney Region by 2056 referred to in the Draft Greener Places Design Guide.

Landscape zones can also provide benefit in the form acoustic and visual buffers and when incorporated early in the design process can provide improved outcomes for the streetscape and local context.

Landscaped Area

Area of soil within a development used for growing plants, grasses and trees, but does not include any building, structure or hard paved area.

Deep Soil Zone

An area of undisturbed soil within the development site with no structures or services below, is unimpeded by buildings, structures or hard paving, and has a minimum dimension as defined by the design criteria.

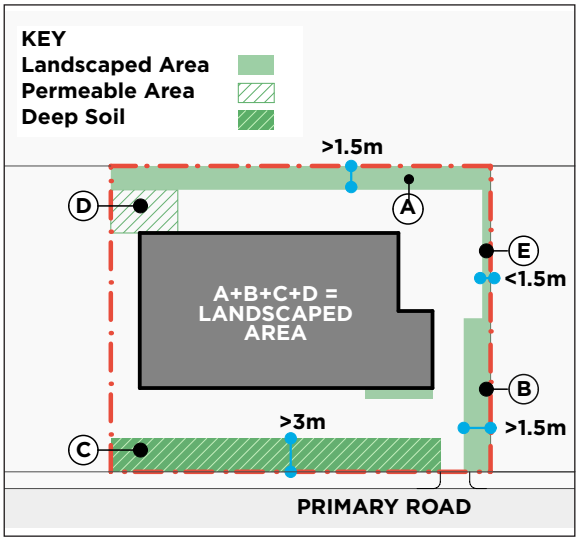


FIG. 4C.1
Calculation of landscape area.

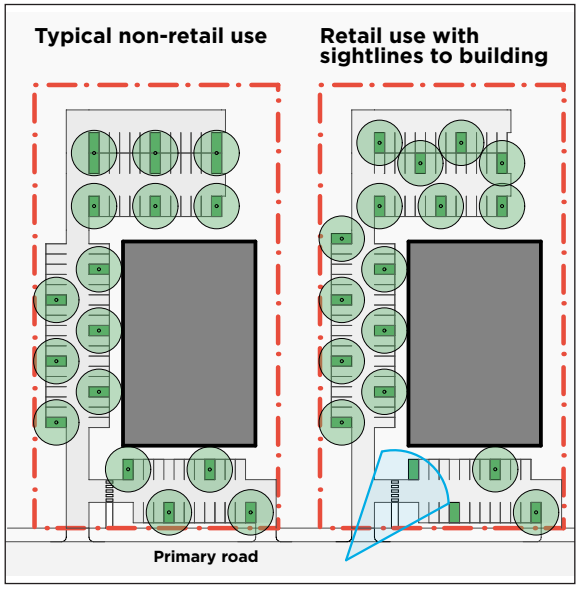


FIG. 4C.2
Planting with parking areas shades hardstand and reduces the heat island effect.
Left: Typical, even distribution
Right: Redistributed to allow sightlines to building facade

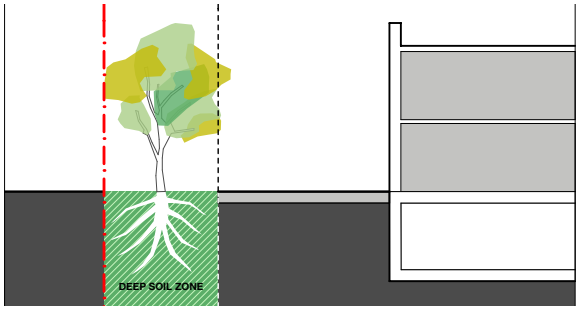


FIG. 4C.3
Deep Soil Zones

Open Space

Open space = Site Area - Site Cover

Open space is divided into Landscaped Area and Hardstand Area.

(Note: Site Cover is defined in 4F: Built Form and Massing).

Permeable Paving

A porous urban surface composed of open pore pavers, concrete or asphalt that allows water to infiltrate into the soil or is filtered back into the drainage system. Permeable paving is a part of the hardstand area.

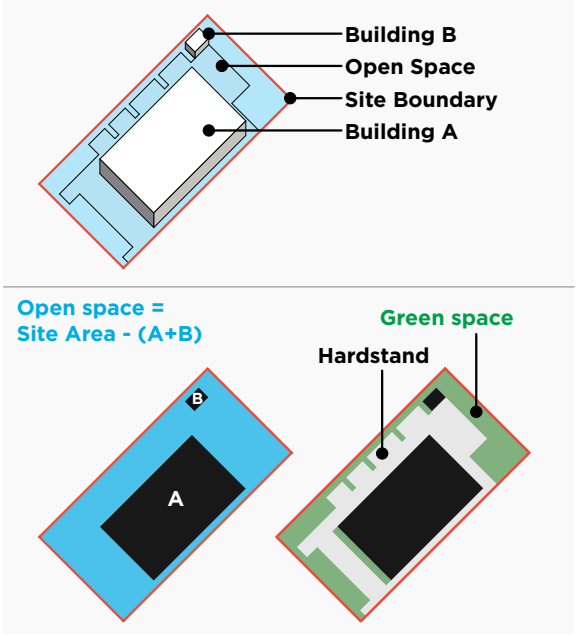


FIG. 4C.4
Open space, Green space and Hardstand

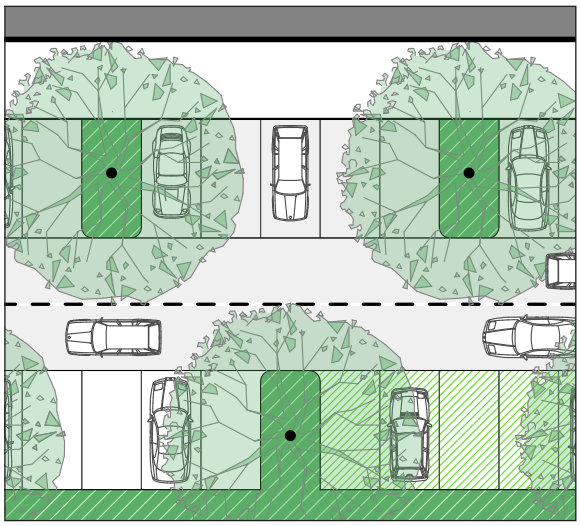


FIG. 4C.5
Offset arrangement of tree planting in carparking areas.

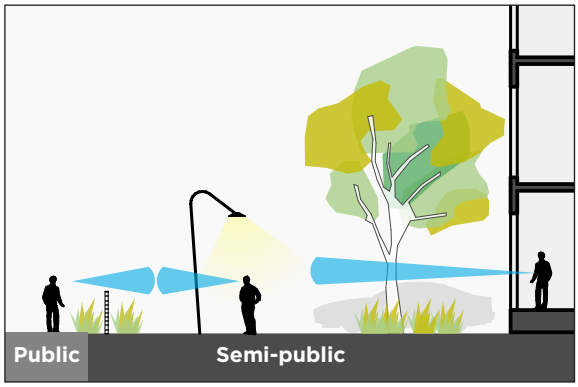


FIG. 4C.6
Landscape design does not hinder passive surveillance opportunities.

Development Standards in Codes SEPP

<table>
<tr><th>Clause</th><th>Description</th><th>Control</th></tr>
<tr><td>5A.3</td><td>Removal or pruning of a tree or vegetation</td><td>Trees or vegetation may be pruned or removed if they meet all of the following:
- If they is not listed on a significant tree register, and
- they are within 3m of the development, and
- the they have a height less than 8m</td></tr>
<tr><td>5A.20A</td><td>Landscaping requirements</td><td>- Development must comply with landscape requirements of a DCP applying to the land</td></tr>
<tr><td>5A.20B (3)</td><td>Infill Site - minimum landscaped area</td><td>- 50% of open space to be landscaped area[1]</td></tr>
<tr><td>5A.20B (4)</td><td>Free Standing Site - minimum landscaped area</td><td><table><tr><th>Height in Storeys</th><th>Minimum Landscaped Area[1]</th></tr><tr><td>1</td><td>25%</td></tr><tr><td>2</td><td>30%</td></tr><tr><td>3</td><td>35%</td></tr><tr><td>4</td><td>40%</td></tr><tr><td>5</td><td>45%</td></tr></table></td></tr>
</table>

Notes:

1. as a percentage of the overall open space
2. Open space = site area - total building footprint
3. Where there is a DCP control for landscaped/open space areas, the greater of the DCP and BZDG area controls applies

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4C-1 Landscaped areas provide shade, acoustic and visual buffers to main roads, permeable surfaces for stormwater, and attractive additions to sites and structures.	- Local controls for landscaped areas and green space are critical considerations. Refer to the LEP and DCP for the relevant controls for your site. - Locate landscaped areas to provide the greatest benefit to the subject site, the public domain, and neighbouring properties - particularly if these are residential properties. - Provide larger, consolidated areas of landscaping rather than long narrow strips, to enable greater varieties of planting, larger plants, and denser screening. Preferably at the front and rear of the site. - Use permeable paving in place of hardstand where possible to reduce stormwater runoff and overland flow. - To reinforce local character assist in the regeneration of local microclimates the landscape design should use local indigenous plants where possible. The landscape maintenance plan includes a schedule of maintenance.	**4C-1.1**	Landscaped area has a minimum dimension of 1.5m
	- Existing significant trees as defined by the local council DCP and landscape features are to be identified, retained, and protected during construction.	**4C-1.4**	Any tree under a tree preservation order must be identified, retained, and protected during construction.
	- Landscaped areas can act as buffers to residential uses.	**4C-1.5**	Landscaping is provided along rear boundaries adjoining residential uses including screening trees.

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4C-2 Trees provide shade to hardstand areas, building facades, and parking areas; reducing the heat island effect, and mechanical cooling requirements for buildings.	- Locate landscaped areas and tree plantings in positions where they provide the greatest amount of shade to communal areas, building facades and roofs, parking, and other hardstand areas. - Visibility of signage is an important consideration for retail uses and other business services. Position trees to maintain visibility of signage, and select trees species that may be pruned to maintain visibility over, but still provide shade. - Landscaped areas and plant selections should not obscure building entries from the public domain. - Developments should endeavour to achieve 25% site canopy coverage inline with the Draft Greener Places Design Guide tree canopy coverage targets.	**4C-2.1** Landscaped areas at side and rear boundaries are to be planted with a species of trees planted at 3m intervals along that frontage that are capable of achieving a height of at least 8m and a crown of 4m at maturity and at least 2m within 2 years of the occupation of the development. **4C-2.2** Where there is on grade car parking, a deep soil area (min 2m x 3m) planted with one shade providing tree shall be provided at the following rates: - **1x tree for every 5 car spaces.** - **Trees to have a minimum height of 8m and a crown of 4m at maturity.** **4C-2.3** Trees must be distributed evenly throughout the parking area to provide the maximum shade benefit. Where trees would obscure essential sightlines to building signage, advertising etc, the distribution of the trees may be denser behind the building line to accommodate. **4C-2.4** Trees within carparking areas are planted in an alternating offset arrangement to maximise shade coverage of hardstand.
Objective 4C-3 Deep soil zones provide areas on the site that allow for and support healthy plants and trees.	- Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees.	**4C-3.1** Deep soil zones are to: - have a minimum dimension of 3m - comprise at least 75% of the landscaped area.

4D: Public Domain Interface

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 2: Integration and connection

Response to Place

The public domain interface is the relationship between the development, its private space at the street edge and the public domain. The careful consideration of this interface can allow a development to make a positive contribution to the streetscape, local context and public domain. In contrast, a poor public domain interfaces such as large, high blank walls or fences, mirrored glazing can negatively impact the public domain and have potential impact on safety.

Key components to consider when designing the public domain interface include building entries, fences and walls, changes in levels, services locations, and planting. Elements of the public domain interface contribute to the effective passive surveillance of the area through establishing clear sight lines and the use of effective lighting.

Active Frontage: Street frontages where there is an active visual engagement between those in the public domain and those within the development. Active frontages enliven streets, increase passive surveillance, and make opportunities for building entries and lobbies.

Passive Surveillance An environment where people can see and be seen through casual observation. Passive surveillance is an important component of public domain safety.

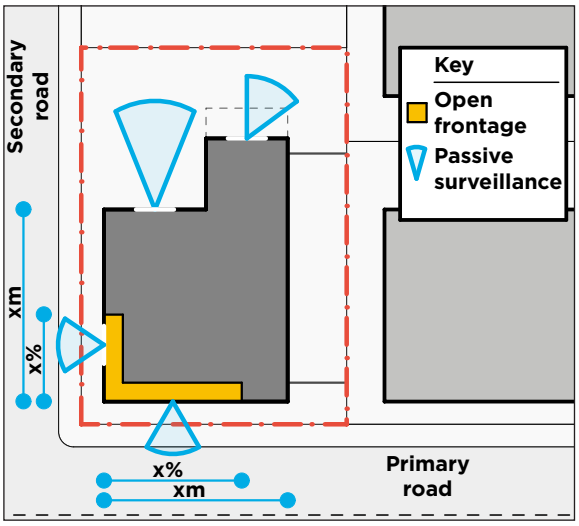


FIG. 4D.1
Street Activation and Passive Surveillance.

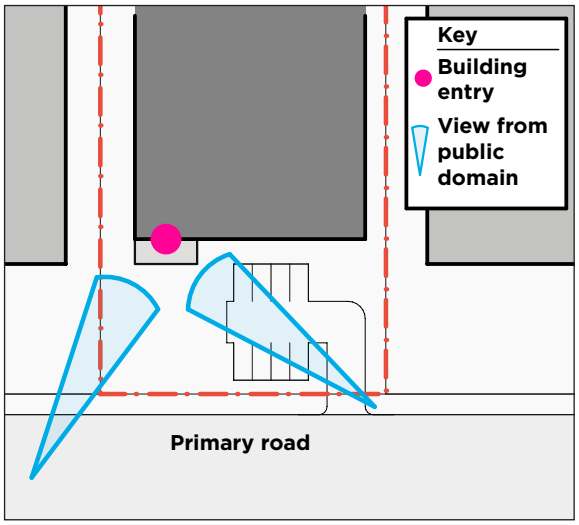


FIG. 4D.2
Building entries visible from the public domain.

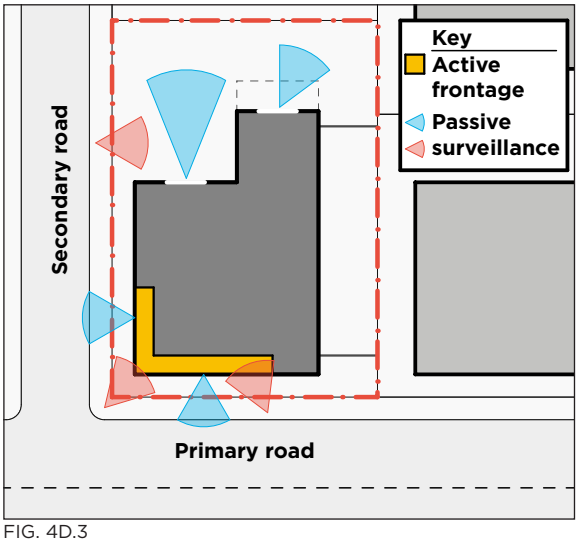


FIG. 4D.3
Passive surveillance is provided to and from the development.

Development Standards in Codes SEPP

Clause	Description	Control
5A.18(e)	General Standards - glazed facades	- Maximum 50% of any new facade facing a street may be glazed. - Glazed facades facing a street must be low reflective glass

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4D-1 The development provides activation and passive surveillance to public streets and public open space.	- Active uses (eg office areas, amenities, circulation stairs) at ground level enliven facades and street frontages - Ground floor engagement (shop fronts, retail showrooms, clear glazed walls and windows to offices) provide activation and passive surveillance to the street and public domain, - Windows from the building provide passive surveillance of the public domain, and external areas of the development - Driveways, loading, and service entries are excluded from active frontage and should be located away from entry lobbies, and active frontages. - Security grills may only be fitted internally behind shop front glazing, are fully retractable, and minimum 50% transparent when closed. - Building types with limited activation, employees, or visitors (eg storage facilities) must still provide dedicated pedestrian entries from the public domain. i.e. A sole entry off a drive way or loading area is not acceptable	**4D-1.1** Locate active uses along street frontages to enliven facades. **4D-1.2** Provide clear glazed openings along the street frontage to active uses behind, to provide engagement with the street, and passive surveillance of the public domain. Infill Sites: Minimum dimensions of ground floor clear glazing to street frontages as a percentage of the facade length: **Primary Road Frontage**: 50% — **Secondary Road Frontage**: 25% **4D-1.3** All publicly accessible external areas of the site are visible from within the building to encourage activation of building facades and to provide passive surveillance of open spaces. **4D-1.4** Ground floor uses and lobbies are to have clear, transparent non-reflective glazing with a predominately unobstructed view from the exterior to a depth of 6m into publicly accessible areas, administration areas, and lobbies.

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4D-2 Building entries provide employees, customers, and visitors with a welcoming, accessible, entry point.	- Building entries should be accessible, clearly defined, inviting, and visible from the public domain. - Building entries should provide weather protection in the form of an awning or undercroft of a suitable size for small groups to wait undercover. - Building entries should be located on the frontage to the primary street where possible. Where this is not possible, they are visible from the public domain, and clearly sign posted.	**4D-2.1**	Building Entries: - are accessible, clearly defined, inviting, and visible from the public domain, - Provide weather protection - Are located on the primary frontage
Objective 4D-3 Secondary frontages make a positive contribution to the public domain.	- The secondary frontages to corner lots provide a positive contribution to the public domain by providing an active edge to the boundary treatment. - Secondary frontages should be articulated and modelled to provide interest along the street edge. - Secondary frontages have activated facades with areas of clear glazing to active uses behind.	**4D-3.1** **4D-3.2** **4D-3.3**	Frontages to secondary roads are considered as active edges to the public domain and are integrated with the design. Secondary frontages have ground floor glazed frontages Setbacks to secondary frontages are landscaped.
Objective 4D -4 Building services and essential equipment are integrated with the building design.	- Service enclosures, cupboards, and doors that address the public domain, should be integrated with the design of the building. - Locate service entries, and loading areas away from main building entries and lobbies.	**4D-4.1**	Locate essential services and equipment required to be accessible from the public domain: -On the secondary street frontage where possible and permissible, -In services enclosures and cupboards integrated with the building design.

4E: Site Access

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 2: Integration and connection

Reponse to Place

Building entries provide a connection with the public space and an address for a building. Access for pedestrians, cyclists and vehicles should be safe, legible and equitable. The design and their integration with the overall building architecture and landscape contribute to the identity and character of the streetscape.

Vehicle access points can have a significant impact on the streetscape, site layout and building design. Early consideration within the planning process potential conflicts with traffic patterns, streetscape elements and building users to be considered.

Good pedestrian access delivers high quality, safe and pleasant walking environments along the street and into the development. For larger sites in particular sites clear and dedicated pedestrian access integrated throughout the site including between parking and the building is essential.

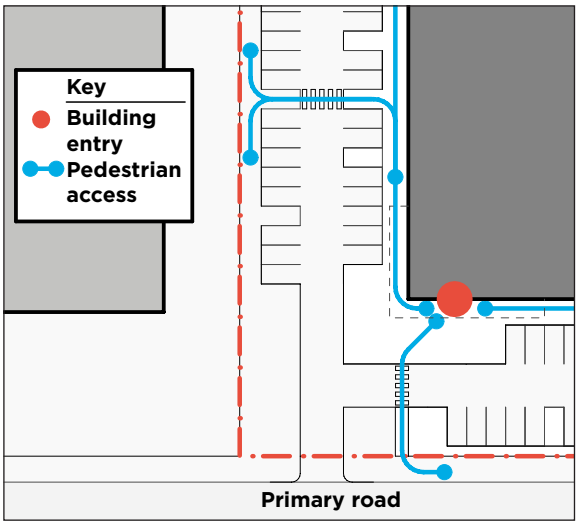


FIG. 4E.1
Safe pedestrian access from street and carparking to building entry.

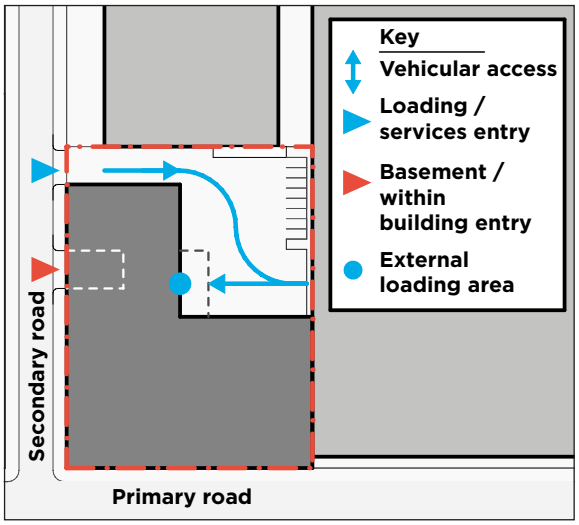


FIG. 4E.2
Access to loading and service areas.

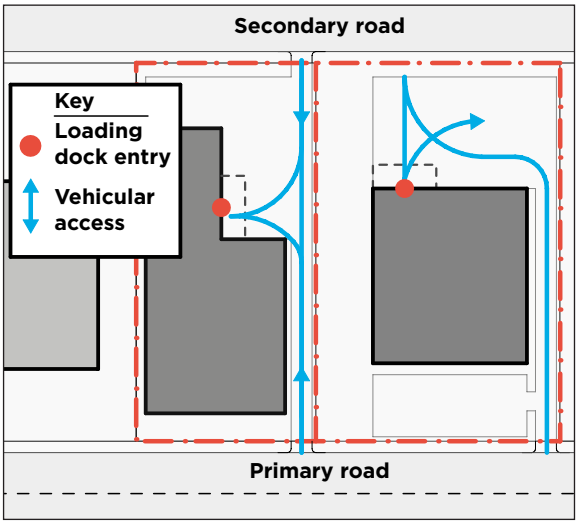


FIG. 4E.3
Off street parking and loading access for corner sites.

Development Standards in Codes SEPP

Loading Facilities and Driveways

Clause	Description	Control
5A.6B (4)	Manual collection points	- The land must not contain underground storage tanks
5A.6G (1)	Loading Bays and Faciliites	- Loading Facilities must be wholly contained within the site
5A.6G (2)	Location of loading bays	- Loading bays must be located behind the front building line, and - Must not be located adjacent to residential accommodation
5A.6G (3)	Driveways	- Vehicles must be able to leave the lot in a forward direction
5A.6G (4)	Design of driveways	Must be in accordance with: - AS/ANZ 2890.1:2004, or - AS/ANZ 2890.2:2018, and - *Guide to Traffic Generating Developments*, Version 2.2, published by the Roads and Traffic Authority in October 2002

Bunding

Clause	
5A.6E	Controls for the storage and handling of chemicals and fuels on site.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4E-1 Provide safe and equitable site access for pedestrians, cyclists, and vehicles.	- Dedicated safe and direct pedestrian access should be provided that is not in conflict with vehicular access and circulation. - Pedestrian access should be equitable and legible and should form a primary entry from both the street and carpark. - Safe and legible access to staff and visitor bicycle parking should be provided that is not in conflict with vehicular access and circulation.	**4E-1.1**	Provide accessible pedestrian path from street front boundary to building entry, separated from any vehicular circulation or parking.
		4E-1.2	Provide marked crossings where pedestrian access crosses any road or driveway.
		4E-1.3	Provide an accessible pedestrian circulation path from all car parking areas to building entry. Provide dedicated circulation path, separate to any road or drive, adjacent building from carpark to building entry.
		4E-1.4	Public access is restricted to areas unsafe or unsuitable for public access in the form of fencing or barriers.

OBJECTIVE	DESIGN GUIDANCE		DESIGN CRITERIA
	- Provide fencing or barriers should be used to restrict access to unsafe areas (eg. areas where machinery or commercial vehicles are operated).	4E-1.5	Public access is restricted to areas not visible from the public domain outside of business hours.
Objective 4E-2 The location of vehicular access to the site is a considered part of the urban design of the development.	- Vehicular access should be located to minimise impact on the streetscape and surrounding local context. - Kerb crossings are subject to council and/or road authority approval		
Objective 4E-3 Entries to basement parking and servicing areas are located and designed to minimise their impact on the public domain.	- The impact of basement parking, entries and loading areas should be designed to minimise the impact on the streetscape. - Loading areas should be located to the rear of the site to minimise the impact on the streetscape and residential uses. - Sufficient area is to be provided for the safe manoeuvring of large trucks and service vehicles as required for operation of the development. - The size and layout of loading areas should be appropriate for the use and ongoing operation of the development. - Clear delineation of the loading areas should be provided to ensure safe ongoing operation. - On larger sites, dedicated service vehicle circulation may be considered to ensure safe movement of pedestrian, vehicles and service vehicles.	4E-3.1 4E-3.2	Locate entries to basement parking and loading areas off secondary roads or lanes where available. Loading Areas: -Access off secondary road where available -Free Standing Sites: Locate loading areas at rear of site, behind building line. -Infill Sites: Locate loading areas at rear of site, behind building line where possible. Where not possible, locate loading areas including manoeuvring areas for vehicles within building envelope.

4F: Built Form and Massing

RELATED DESIGN PRINCIPLES:

Design Principle 3: Aesthetics and appearance

Design Principle 5: Resilient buildings

The Built Form and Massing Development Standards and Design Criteria set out the general controls that will determine the built form envelope.

Site Coverage

Site cover is defined in the Codes SEPP as the proportion of site area covered by buildings.

The maximum site cover permissible on a site is a function of the average height in storeys.

Floorspace

Floorspace is the measurement of gross floor area (GFA) and calculation is defined in the Standard Instrument.

Height

Building heights can be measured in storeys and in metres above the existing ground level.

Building height in metres is important component in defining the overall building envelope and relative setting within a context.

Where a maximum height in metres is identified for the site under the relevant LEP, that height will apply.

Heights in storeys is a useful guide to the character and scale of a development unaffected by ceiling heights which can vary significantly across development types.

In the BZDG there is a proportional relationship between Height in Storeys and the permissible site cover. As the number of storeys increases, the amount of open space increases with it.

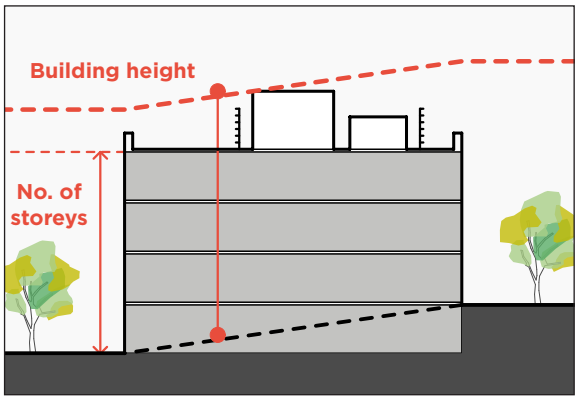


FIG. 4F.1
Measurement of building height.

Height in Storeys - Multiple Buildings

Where there are multiple buildings on a site, or where a single building has multiple volumes of varying heights, the average height in storeys across the site is used to determine the maximum site coverage.

The average height in storeys is measured as the average of the heights of all buildings on the site in proportion to their footprint:

$$\frac{(a^1 \times b^1) + (a^2 \times b^2) + (a^n \times b^n)}{y} = \text{avg height in storeys rounded up}$$

Where:
a = height in storeys
b = building footprint
y = total footprint of all buildings

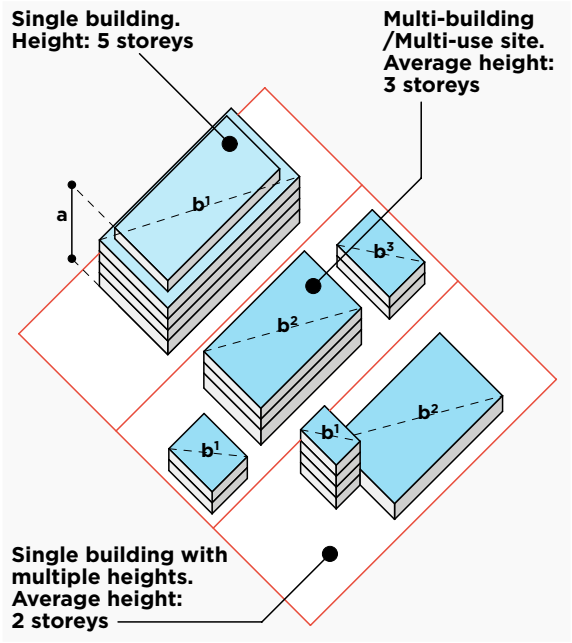


FIG. 4F.2
Determining the predominant storey height

Distinct Elements

Buildings should be designed in response to their context, and as a considered ensemble of elements.

There is a wide range of urban contexts that apply to this Guide, and how the building is articulated and expressed will differ based on the context and use. For example,

- a large lot on a fine grained urban site should be broken down into smaller vertical components
- A lot in a precinct characterised by larger buildings, may be considered as a larger volume, but should be broken down into smaller elements as appropriate to reflect functional parts, pedestrian scaled elements at ground level, to break up large unbroken areas of facades.

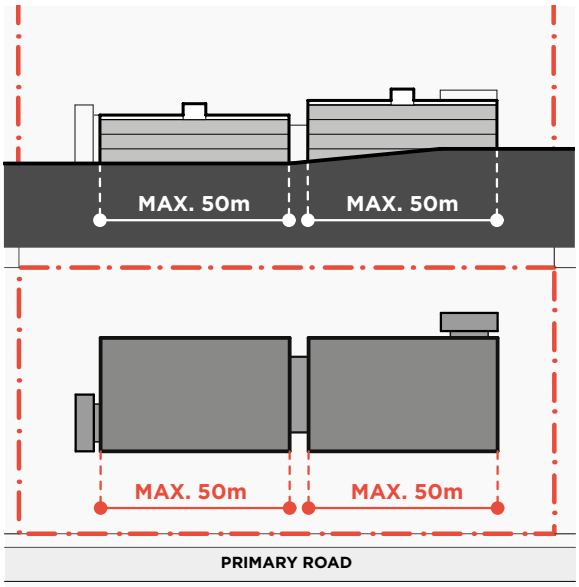


FIG. 4F.3
Long buildings are broken down into smaller elements.

Development Standards in Codes SEPP

Floorspace

Clause	Description	Control
5A.19(2)	Maximum Gross Floor Area	- 10,000m^2
5A.6B(2)	floor area controls for certain land uses in other instruments	Refer to relevant LEP Clause 5.4(4), (6), (7), (7AA), (10)
5A.6D	Maximum GFA for particular specified purposes:	
	- Retail areas of artisan food and drink industries	the lesser of: - maximum GFA under an EPI - 30% of the GFA of the building - 400m^2
	- Industrial retail outlets or office premises	the lesser of: - maximum GFA under an EPI - 30% of the GFA of the building - 5,000m^2
	- Goods repair and reuse premises	- for a business building: 500m^2 - for and industrial building: 5,000m^2
	- Amusement centres, creative industries, entertainment facilities, function centres, recreational facilities (indoor)	1,000m^2

Floorspace Ratio

Clause	Description	Control
5A.20	Maximum Floorspace ratio	- Maximum floorspace in an EPI applying to the lot, or - 1:1 where no EPI control

Maximum Height

Clause	Description	Control
5A.21 (1)	Maximum height where there is a dwelling on an adjoining lot	8.5m
5A.21 (1A)	Maximum height of a new building or addition where no dwelling adjoining	The lesser of: - Maximum height in an EPI applying to the lot, - 21m where no LEP control

Site Coverage

Clause	Description	Control		
5A.20B	Minimum open space as a percentage of site area	**Average Height in Storeys**	**Free Standing Site[1]**	**Infill Site[1]**
5A.20B (2)	Infill site			
5A.20B (4)-(8)	Free standing site	1	60%	50%
		2	65%	45%
		3	65%	40%
		4	70%	35%
		5	70%	30%

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4F-1 Buildings and sites contribute to a finer grained urban environment through built form articulation and through site links.	- Large buildings should be broken up or articulated to reduce overall perceived scale and provide architectural interest. - Building facade should provide a balanced composition of elements including solid and void and have an appropriate scale and proportion to the streetscape. - Through site links should be considered where it would provide a positive contribution to the public domain.	**4F-1.1**	The maximum length of unbroken building form is 50m.
		4F-1.2	On sloping sites, built form steps with the slope of the land at breaks in building form.
		4F-1.3	Design Verification Statement to outline how the building has been articulated and/ or considered as discrete elements in response to the local context
		4F-1.4	Outline how the facades of the building have been designed to add visual interest through the building structure, facade design, and signage integration.
		4F-1.5	The average height in storeys has been determined using the following calculation: $\frac{(a^1 \times b^1) + (a^2 \times b^2) + (a^n \times b^n)}{y} =$ average height in storeys rounded up the nearest whole number Where: a = height in storeys b = building footprint y = total footprint of all buildings

4G: Parking

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 2: Integration and connection
Design Principle 4: Greening the grey

Car parking can have significant impact on site planning, landscape and building design. On site parking can be on-grade, underground or above ground within a structure. The type and configuration of parking will usually be an outcome of site constraints, lot size, local context, feasibility and regulatory requirements. The extent and type of parking will also be influenced by the building use and associated parking requirements varying across building types.

Development types within this zoning are commonly defined by large areas of a site dedicated to on-grade parking. Successful integration of on-site parking does not dominate the built form or streetscape and is integrated into the overall building and landscape design.

Alternative forms of active transport such a bicycle parking should also be considered within the design of parking areas.

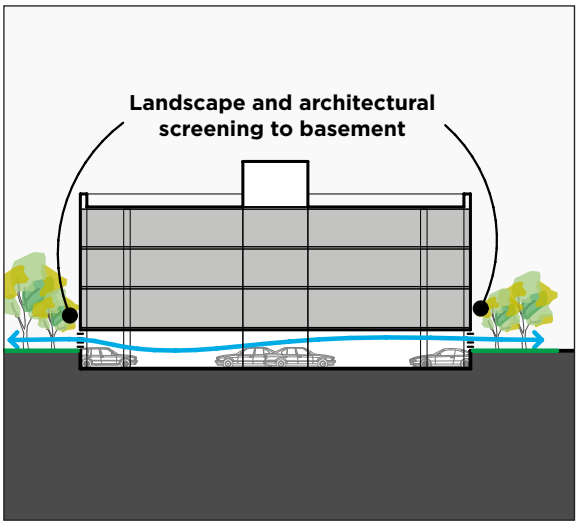


FIG. 4G.1
Natural ventilation to basement parking.

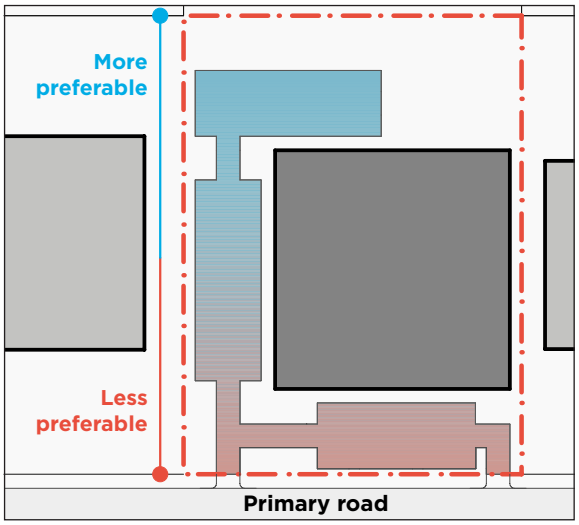


FIG. 4G.2
Car parking in front of building line is discouraged.

Development Standards in Codes SEPP

Carparking and Access

Clause	Description	Control
5A.6F (1A)	Car parking on site	Must be either: - in accordance with an EPI or DCP, or a contributions plan, - where no EPI or DCP control, in accordance with *Guide to Traffic Generating Developments*, Version 2.2, published by the Roads and Traffic Authority in October 2002
5A.6F (1B)	Contributions in place of parking	- Refer to clause
5A.6F (2)	Australian Standards	- Must be in accordance with relevant Australian Standards.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4G-1 The visual and environmental impacts of on grade car parking should not dominate the streetscape and should be mitigated through siting and landscaping.	- Large areas of on grade car parking between the street and the building should be avoided. Where possible locate parking behind the building line. - The depth of any parking in front of the building should to be limited to maintain a close connection between the street and the building entry. - Carparking layouts should be well organised, and use an efficient, logical structure.	**4G-1.1** On grade parking areas in front of the building line are limited to a maximum of one double loaded parking aisle. **4G-1.2** Carparking areas within the building envelope are screened by active uses to a minimum depth of 6m from the facade for any facade facing the street or public domain.
Objective 4G-2 The visual and environmental impacts of basement and underground car parking should be minimised.	- Basement and underground carparking should be designed to minimise the impact on the streetscape. - Basement parking protruding above the ground level should be integrated into the building and limited in height to not negatively impact the streetscape or prevent equitable access of the building.	**4G-2.1** Basement parking must not protrude more than 1m above ground level. Any basement parking above ground level is to be screened to block views into the basement. **4G-2.3** Natural ventilation must be provided to basement parking that has external walls above ground level.

<table>
<tr><th>OBJECTIVE</th><th>DESIGN GUIDANCE</th><th colspan="2">DESIGN CRITERIA</th></tr>
<tr><td></td><td>- Landscaping may be used to screen basement parking that protrudes above ground level</td><td>4G-2.4</td><td>Ventilation grills, openings, and screening devices must be integrated into the architectural design.</td></tr>
<tr><td>Objective 4G-3

Carparking areas are safe and secure</td><td>- Carparking should provide dedicated, safe and legible pedestrian circulation.

- Carparking should incorporate crime prevention through environmental design (CPTED) principles to increase safety. This may include consideration of layout, orientation, landscaping, surveillance and lighting.</td><td>4G-3.1

4G-3.2</td><td>Safe pedestrian routes through carparking areas to dedicated pavements and pathways must be provided and clearly marked with line markings and protected by bollards where required.

Carparking areas to be well lit and comply with all relevant standards, including:
- AS/ANZ 1158 Lighting for roads and public spaces
- and 'Safer by design' guidelines prepared by the NSW Police.</td></tr>
<tr><td>Objective 4G-4

Encourage active transport options with parking facilities for bicycles.</td><td>- Secure covered bicycle parking facilities should be conveniently located for staff and visitors.

- Where suitable, end of trip facilities should be provided to encourage active transport options.</td><td>4G-4.1

4G-4.2

4G-4.3

4G-4.4</td><td>Secure bicycle parking is provided at the following rates:
<table>
<tr><th>Use</th><th>Employee/ Staff</th><th>Visitors/ Customers</th></tr>
<tr><td></td><td colspan="2"># spaces/sqm GFA</td></tr>
<tr><td>Office/ business use</td><td>1/150m²</td><td>1/400m²</td></tr>
<tr><td>Bulky goods/ warehouse</td><td>1/600m²</td><td>1/1000m²</td></tr>
<tr><td>Shop, retail, cafe</td><td>1/250m²</td><td>1/100m²</td></tr>
<tr><td>Shopping Centre</td><td>1/200m²</td><td>1/300m²</td></tr>
</table>
Basement parking is located at the uppermost level and near the basement entry.

Visitor and customer parking is located in a publicly visible area close to the main entry point of the building.

Secure bicycle parking is to be to the following standard:
Employees/Staff: Class 2
Visitors/Customers: Class 3</td></tr>
</table>

4H: Amenity

RELATED DESIGN PRINCIPLES:

Design Principle 2: Integration and connection
Design Principle 3: Aesthetics and appearance
Design Principle 4: Greening the grey
Design Principle 5: Resilient buildings

Amenity encompasses any desirable or useful feature of a building or place. Various qualities of a design can contribute and enhance the amenity of the building for users of the space. This may include design, access to sunlight, spatial qualities, facilities and services.

Daylight and Solar Access

Daylight and solar access is important in reducing reliance on artificial lighting and heating, and in providing a pleasant work environment. Solar access is when a room or space receives direct sunlight without obstructions from other buildings or natural features, excluding trees. Daylight consists of sunlight and diffused light from the sky. Daylight requirements are relevant to office buildings as well as office spaces and all other work areas within a development.

Ceiling Height

Ceiling heights affect the amenity of a building, the perception of space, and the amount of daylight access. Well designed spaces may also vary ceiling heights to respond to function or design intent.

Natural Cross Ventilation

Cross ventilation reduces the need for mechanical air conditioning, and provides fresh air to occupants of a building. Cross ventilation is enabled by providing opening windows on opposite sides of an unobstructed space within a building.

Communal Open Space

The inclusion of communal open space in workplaces is an important amenity provision that provides staff and employees with recreational space benefiting from natural light and ventilation. Communal open spaces provide opportunities for social interaction among staff and employees with the design, scale and location of the space varied depending on the building use and context.

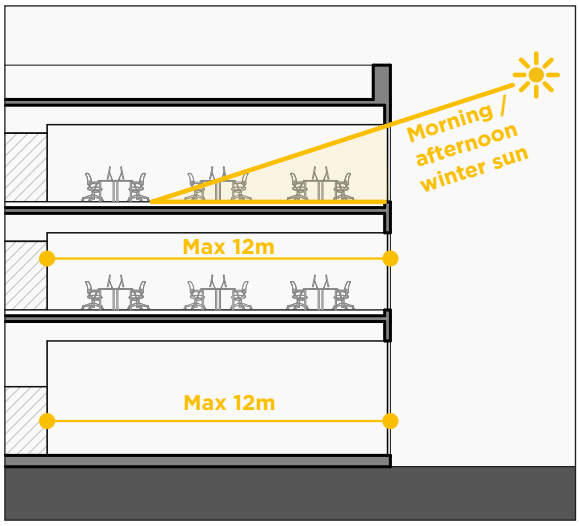


FIG. 4H.1
Maximum depth from facade to workspaces is limited to allow good daylight access.

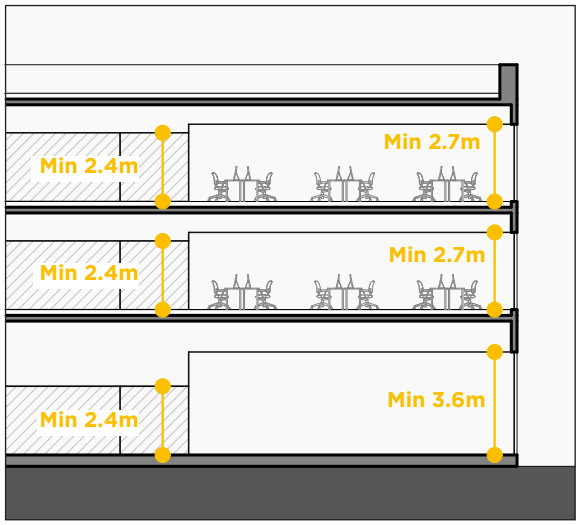


FIG. 4H.2
Minimum ceiling heights.

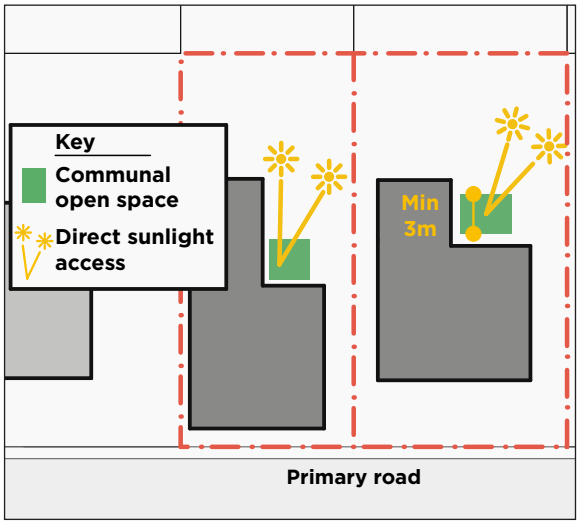


FIG. 4H.3
Deep Soil Zones.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA
Objective 4H-1 Commercial buildings provide workplaces or office spaces within a building with good daylight and solar access.	- Workplaces should be designed and configured to maximise equitable access to daylight. - Enclosed spaces and rooms should be limited along the building perimeter to maximise natural daylight access. - Site constraints may require reduced building depths to meet good daylight and solar access amenity.	**4H-1.1** Open office areas, workspaces, and office areas within a building are located no more than 12m from building facades providing natural daylight.
Objective 4H-2 Buildings use natural cross ventilation to reduce air conditioning usage, and provide healthy work environments.	- Where appropriate, buildings should be designed with narrow floor plates and operable windows on opposing facades to allow for natural cross ventilation. - Opening windows should be located away from site constraints that would lead to them not being opened or used. eg busy roads, noisy equipment, sources of odours.	
Objective 4H-3 Ceiling heights allow for habitable areas with a high degree of amenity.	- Ceiling heights should be designed to allow for sufficient daylight penetration into the room or space. - Ceiling heights should be proportional to the room or space and use. - The vertical stacking of wet areas should be considered as a way of achieving maximum ceiling heights to primary use spaces.	**4H-3.1** The following minimum ceiling heights are provided: **3.6m** Ground Floor retail, workspaces, areas accessible to the public, lobbies **2.7m** Upper Levels - Workspaces, offices, areas accessible to the public **2.4m** Bathrooms, kitchens, storage areas, circulation

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4H-4 Workplaces provide accessible open space for staff and employees.	- Communal open space should be consolidated into a well design, easily identified and usable area, and where practical co-located with landscaped areas. - Communal open space should be located and designed to benefit from daylight and natural ventilation. - Where practical, communal open space should be located in proximity to communal kitchen facilities. - Communal open spaces should not be located where it would have a negative impact on the local context, and may be located on rooftops and balconies.	**4H-4.1**	Provide 0.5m^2 per employee accommodated on the site (as defined by the BCA) as communal open space. **4H-4.2** Communal open space is to have a minimum dimension of 3m x 3m and receive 2 hours of direct sunlight between the hours of 9am - 6pm. **4H-4.3** Communal open space is shaded and furnished to accommodate seating and eating.

4I: Appearance and Materials

RELATED DESIGN PRINCIPLES:

Design Principle 1: Place and context
Design Principle 3: Aesthetics and appearance
Design Principle 5: Resilient buildings

Architectural form is a key element defining the way in which a building is viewed from a distance. An balanced composition of built form allows a building to provide a contribution to the local area and streetscape.

Architectural form includes the shape and proportion of a building and considers all dimensions of the building mass including roof form.

Finer details of architectural form include articulation and facade design which are important in contributing to the buildings visual interest and breaking up the scale of a building.

Energy

Energy efficient design involves managing the thermal performance and energy consumption of a building which can benefit the amenity of the occupants in addition to reducing energy costs.

Passive environmental design uses natural sources of heating and cooling to maintain comfortable environment within a building.

Passive strategies include using the thermal mass of building materials to store heat when needed, providing external shading of outdoor spaces and windows from the summer sun, orienting the building to maximise winter sun exposure, providing cross ventilation, and providing appropriate insulation.

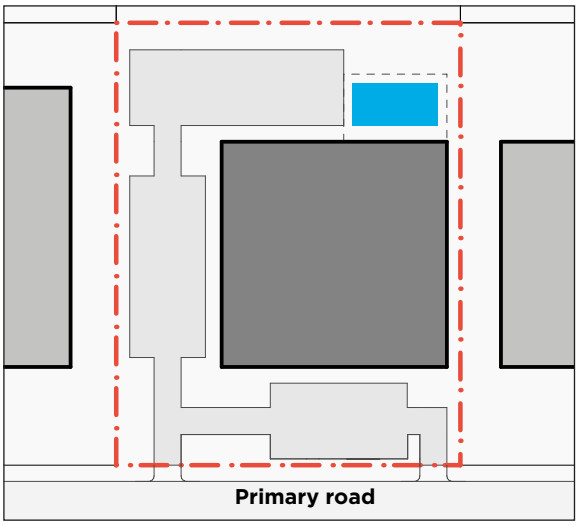


FIG. 4I.1
Plant and equipment at ground is located behind the building line and is acoustically and visually screened.

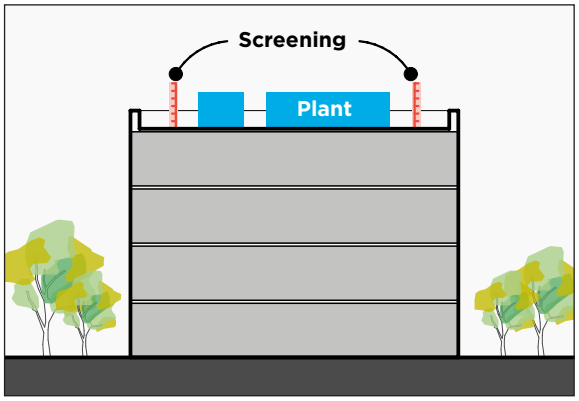


FIG. 4I.2
Rooftop plant is acoustically and visually screened

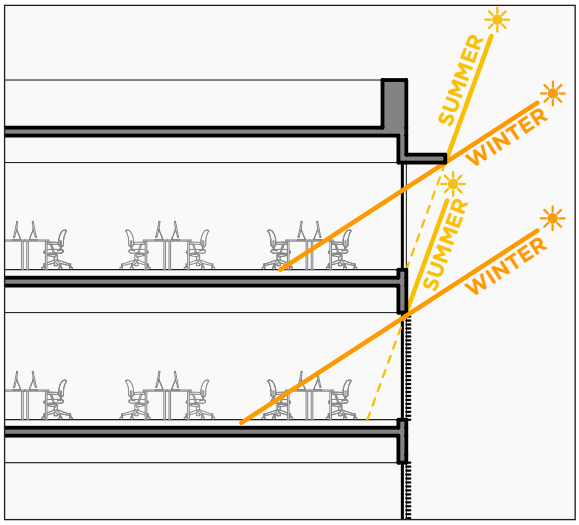


FIG. 4I.3
Shading devices such as awnings are provided to reduce heat loading.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4I-1 Architectural form is defined by a balanced composition of elements and makes a positive contribution to the urban environment.	- Developments should consist of a considered built form and urban design that provides a positive contribution to the local area and streetscape. - Building forms are broken down to reflect the grain of the immediate context	**4I-1.1** **4I-1.2**	- The DVS includes a statement outlining how the design of the building exhibits good proportions and a balanced composition of elements that reflects the building's use, its structure, and internal planning. - The DVS must include diagrams, or elevations demonstrating how the aesthetics and composition of the proposed buildings are considered in relation to the surrounding buildings and context.
Objective 4I-2 Plant and equipment is screened and screening elements are integrated into the architectural design	- Screening is to be considered as a part of the architectural design and integrated into the overall design of the building. - Screening of plant and equipment elements should be a secondary preference, with primary emphasis on locating elements out of view from the public domain.	**4I-2.1** **4I-2.2**	All plant and equipment is screened from view from the public domain, and any residential or mixed use areas. Ground level plant to be located behind the front building line. Or rooftop plant to be set back from perimeter and screened for visual privacy and to meet acoustic regulations.

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4I-3 Material selection contributes to the design of an aesthetically pleasing, durable and resilient commercial building.	- Materials should be robust to create a long lasting and low maintenance environment - Materials should be selected with an understanding of the effects of weathering to ensure a high quality finish that endures for the life of the building. - Materials should be selected for their low embodied energy and potential for future re-use or recycling. - Materials should not be highly reflective to avoid glare and the absorption of heat. - Street walls should be articulated through colour, texture and materiality to provide scale and street definition and pedestrian interest.	**4I-3.1** **4I-3.2**	Construction materials are robust and durable. This includes materials that are unpainted and pre-finished. The Design Verification Statement describes how materials have been selected to reflect the surrounding context.
Objective 4I-4 The building incorporates passive environmental design to reduce energy usage and ongoing costs.	- Avoid dark or mirrored glass as means of reducing heat loading. Incorporate overhangs and shading devices such as awnings, blinds and screens. Particularly on north, east and western facing glazing. - Maximise thermal mass where possible in north facing rooms. - Use light coloured roofing materials to reduce heat loading and ongoing energy usage costs.	**4I-4.1** **4I-4.2**	Light coloured roofing materials with a high Total Solar Reflectance are to be used to reduce heat loading. North, east, and west facing glazing is shaded by external screens, louvres, or overhangs.

4J: Water

RELATED DESIGN PRINCIPLES:

Design Principle 4: Greening the grey

Water management includes the integration of Water Sensitive Urban Design (WSUD). WSUD is the integration of urban planning with management, protection and conservation. This takes into account all elements of the water cycle including potable water, rainwater, wastewater, stormwater and groundwater. Consideration from design, construction to ongoing use of the building can help achieve a better urban water management outcome.

Implementations can range from initial planning measures such as the maximising of deep soil zones for water infiltration to detailed building design relating to water capture, consumption and reuse.

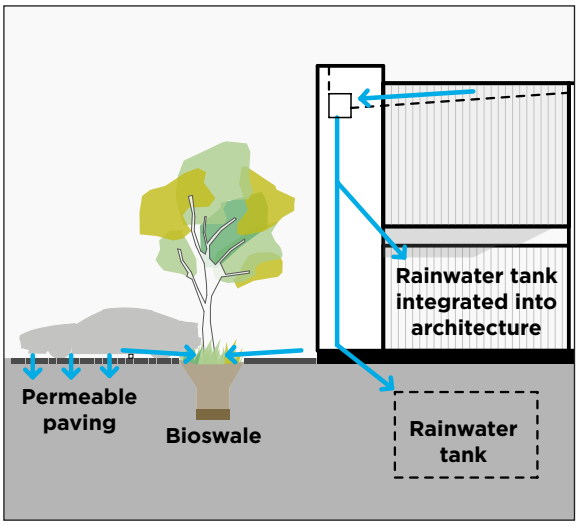


FIG. 4J.1
Stormwater can be controlled on-site by use of rain gardens or rainwater tanks.

Development Standards in Codes SEPP

Drainage

Clause	Description	Control
5A.6I	Stormwater Drainage	Stormwater drainage must be connected to: - a public drainage system, or - an inter-allotment drainage system, or - an on-site disposal system.
		- Must comply with the applicable DCP

Design Criteria

OBJECTIVE	DESIGN GUIDANCE		DESIGN CRITERIA
Objective 4J-1 Water sensitive urban design (WSUD) principles are implemented in the design of the site and building.	WSUD should incorporate the following principles: - Protect and enhance natural watercourses and their associated ecosystems and ecological processes. - Maintain, protect and/or rehabilitate modified watercourses and their associated ecosystems and ecological processes towards a natural state. - Minimise potable water demand and wastewater generation. - Match the post development runoff to the pre development or natural water runoff regime as closely as possible. - Mitigate the impacts of development on water quality and quantity. - Mitigate the impacts of development on groundwater, particularly in saline groundwater environments. - Ensure any changes to the existing groundwater regime do not adversely impact upon adjoining properties.		Note: Where there is a conflict, local stormwater approval take precedence **4J-1.1** Locally-harvested rainwater must be the primary source of non-potable water for developments. Where non-potable demand within a development site is low, alternative uses for roof water such as landscaping, roof gardens, as well as off-site re-use, are to be considered so as to minimise the volume of stormwater discharged to local waterways. **4J-1.2** Above ground water tanks are integrated into the architecture of the development through material selection or screening Rainwater tank storage does not contribute to on site detention volume and cannot be used to offset on site detention requirements

OBJECTIVE	DESIGN GUIDANCE		DESIGN CRITERIA
	- Integrate water cycle management measures into the landscape and urban design to maximise amenity. - Minimise the potential impacts of development and other associated activities on the aesthetic, recreational and ecological values of receiving waters. Minimise soil erosion and sedimentation resulting from site disturbing activities - Ensure the principles of ecologically sustainable development are applied in consideration of economic, social and environmental values in water cycle management. - OSD tanks should be located under paved areas, driveways, in basements, or other areas where they do not impact landscaped areas, and permeable ground surfaces.	4J-1.3 4J-1.4	Minimise impervious areas that are directly connected to the stormwater system. Runoff from impervious areas such as driveways, paving and rainwater tank overflows are to be directed onto landscaped areas designed to accept such flows Specify plant species native to the Sydney region in water sensitive urban design features and associated landscaping, to avoid spread of weed propagules to downstream wetlands.

4K: Waste

RELATED DESIGN PRINCIPLES:

Design Principle 2: Integration and connection
Design Principle 3: Aesthetics and appearance
Design Principle 4: Greening the grey

Construction Waste

Waste generated by demolition of existing structures, as well as waste generated by construction forms a significant contribution to landfill and the carbon footprint of a project.

Construction related waste should be minimised through the re-use and recycling of materials wherever possible.

Operational Waste

The minimisation and effective management of waste contributes to the visual and physical amenity of the building in addition to limiting any potential harmful impacts on the environment.

Waste minimisation is applicable to all stages of the building's life cycle ranging from waste generated throughout construction to on- going use of the building.

Waste management should be considered early in the design process. This includes considering the safe storage and collection of waste and recycling. Storage and collection of waste can also significant negative impacts on the amenity of the building, public and private domain.

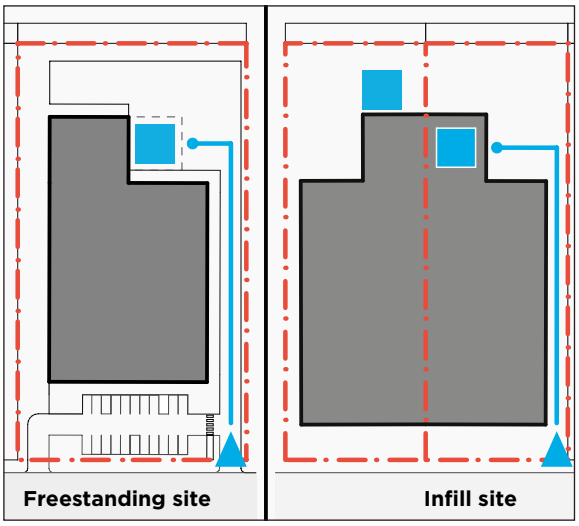


FIG. 4K.1
Waste collection and storage areas located to the rear of the building.

Development Standards in Codes SEPP

Garbage and waste storage

Clause	Description	Control
Schedule 8, Clause 24B	Garbage and waste storage	A garbage and waste storage area must: - be provided, - be located entirely within the lot, - comply with the relevant parts specified in the Codes SEPP in NSW EPA document *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* A garbage and waste storage area must: - be screened, - be located behind the primary building line - not located in any car parking, loading, or landscape area - not located on any side of the building that faces a lot with a dwelling on it.

Design Criteria

OBJECTIVE	DESIGN GUIDANCE	DESIGN CRITERIA	
Objective 4K-1 Waste and recycling storage areas are integrated with the site planning and building design.	- Temporary storage of bulky items should be provided in an area that is not visible from the street. - Rear lane or secondary road access for waste collection in preferred. - Waste collection should be designed to minimise impacts on the public and private domain and building access. - Waste storage facilities should be designed to minimise impacts on the streetscape, building entries and the public domain.	**4K-1.1**	Waste storage areas are screened from view from the public domain, residential and mixed use areas, and carparking areas.
		4K-1.2	Waste storage areas and collection points are to be located to the rear of the building or within a basement.
		4K-1.3	Waste collection points are located on-site and must: -be located on a surface with a gradient less than 1:20, -not require access through a security door or gate (unless this is permitted by council's waste policy), -have a path connecting the collection area to the street boundary with a gradient less than 1:8 and free of steps to all for the transfer of bins to the collection vehicle

Step 5: Prepare the Design Verification Statement

The BZDG Design Guide contains objectives and Design Criteria that must be met and verified in order for approval as Complying Development.

A Design Verification Statement must be prepared by a registered architect that demonstrates compliance with each of the applicable Development Standards and Design Criteria.

In many cases, the architect will be able to tick a box to notify of compliance, or that the criteria is not applicable to the particular development.

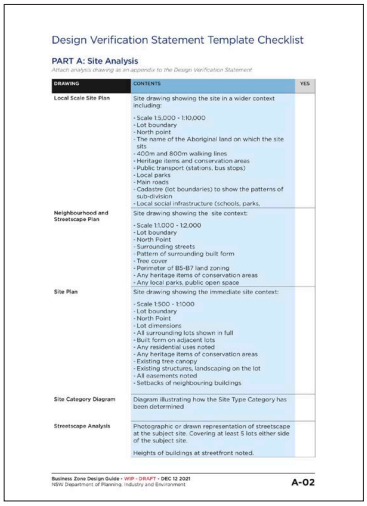
In some cases, a more detailed response, supporting documentation, and/or additional drawings will be required,

A template for the Design Verification Statement may be found in the Appendices of this Guide.

A building that is to be assessed as complying development under Part 5 and Part 5A of the Codes SEPP must be designed by a registered architect.

The Design Verification Statement must be prepared and signed by a registered architect.

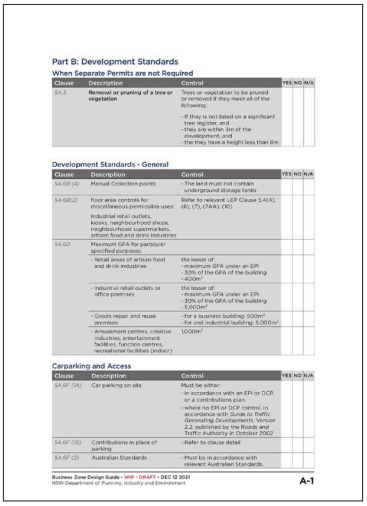
The NSW Architects Registration Board maintains the list of registered architects in NSW.


Design Verification Statement Template Checklist

PART A: Site Analysis

A-02

PART A: SITE ANALYSIS


Part B: Development Standards

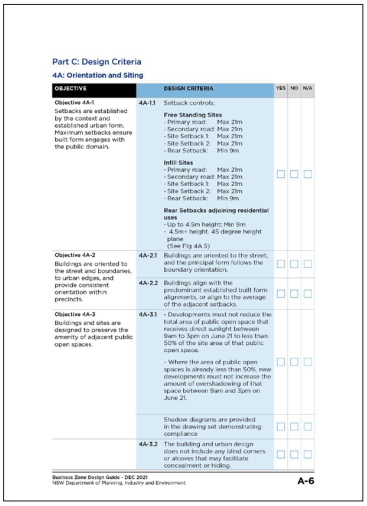
When Separate Permits are not Required

Development Standards - General

Carparking and Access

A-1

PART B: DEVELOPMENT STANDARDS


Part C: Design Criteria

4A: Orientation and Siting

A-6

PART C: DESIGN CRITERIA

Appendices

Design Verification Statement Template Checklist

PART A: Site Analysis

Attach analysis drawing as an appendix to the Design Verification Statement

DRAWING	CONTENTS	YES
Local Scale Site Plan	Site drawing showing the site in a wider context including: - Scale 1:5,000 - 1:10,000 - Lot boundary - North point - The name of the Aboriginal land on which the site sits - 400m and 800m walking lines - Heritage items and conservation areas - Public transport (stations, bus stops) - Local parks - Main roads - Cadastre (lot boundaries) to show the patterns of sub-division - Local social infrastructure (schools, parks,	
Neighbourhood and Streetscape Plan	Site drawing showing the site context: - Scale 1:1,000 - 1:2,000 - Lot boundary - North Point - Surrounding streets - Pattern of surrounding built form - Tree cover - Perimeter of B5-B7 land zoning - Any heritage items of conservation areas - Any local parks, public open space	
Site Plan	Site drawing showing the immediate site context: - Scale 1:500 - 1:1000 - Lot boundary - North Point - Lot dimensions - All surrounding lots shown in full - Built form on adjacent lots - Any residential uses noted - Any heritage items of conservation areas - Existing tree canopy - Existing structures, landscaping on the lot - All easements noted - Setbacks of neighbouring buildings	
Site Category Diagram	Diagram illustrating how the Site Type Category has been determined	
Streetscape Analysis	Photographic or drawn representation of streetscape at the subject site. Covering at least 5 lots either side of the subject site. Heights of buildings at streetfront noted.	

Part B: Development Standards

When Separate Permits are not Required

Clause	Description	Control	YES	NO	N/A
5A.3	**Removal or pruning of a tree or vegetation**	Trees or vegetation to be pruned or removed if they meet all of the following: - If they is not listed on a significant tree register, and - they are within 3m of the development, and - the they have a height less than 8m			

Development Standards - General

Clause	Description	Control	YES	NO	N/A
5A.6B (4)	Manual Collection points	- The land must not contain underground storage tanks			
5A.6B(2)	ffloor area controls for certain land uses in other instruments	Refer to relevant LEP Clause 5.4(4), (6), (7), (7AA), (10)			
5A.6D	Maximum GFA for particular specified purposes:				
	- Retail areas of artisan food and drink industries	the lesser of: - maximum GFA under an EPI - 30% of the GFA of the building - 400m^2			
	- Industrial retail outlets or office premises	the lesser of: - maximum GFA under an EPI - 30% of the GFA of the building - 5,000m^2			
	- Goods repair and reuse premises	- for a business building: 500m^2 - for and industrial building: 5,000m^2			
	- Amusement centres, creative industries, entertainment facilities, function centres, recreational facilities (indoor)	1,000m^2			

Carparking and Access

Clause	Description	Control	YES	NO	N/A
5A.6F (1A)	Car parking on site	Must be either: - in accordance with an EPI or DCP, or a contributions plan, - where no EPI or DCP control, in accordance with *Guide to Traffic Generating Developments*, Version 2.2, published by the Roads and Traffic Authority in October 2002			
5A.6F (1B)	Contributions in place of parking	- Refer to clause detail			
5A.6F (2)	Australian Standards	- Must be in accordance with relevant Australian Standards.			

Loading Facilities and Driveways

Clause	Description	Control	YES	NO	N/A
5A.6G (1)	Loading Bays and Facilities	- Loading Facilities must be wholly contained within the site			
5A.6G (2)	Location of loading bays	- Loading bays must be located behind the front building line, and - Must not not be located on any side facing a lot containing a dwelling			
5A.6G (3)	Driveways	- Vehicles must be able to leave the lot in a forward direction			
5A.6G (4)	Design of driveways	Must be in accordance with: - AS/ANZ 2890.1:2004, or - AS/ANZ 2890.2:2018, and - *Guide to Traffic Generating Developments*, Version 2.2, published by the Roads and Traffic Authority in October 2002			

Earthworks

Clause	Description	Control	YES	NO	N/A
5A.6H (1)	**Excavation**				
(b)	Land in Class 3 or 4 on the Acid Sulfate Soils Map	- 1m - Maximum depth of excavation below existing ground level			
(c)	Land not in Class 3 or 4 on the Acid Sulfate Soils Map	- Site area <10,000m^2: 3m - max depth of excavation below existing ground level - Site area >10,000m^2: 6m - max depth of excavation below existing ground level			
(d)	Setback of excavation near any natural waterbody	- 40m			
(e)		- No building over a registered easement			
(f)	Excavation near rail corridors	- 3m setback from any rail corridor			
5A.6H (2)	**Fill**				
(a)	Maximum fill	Fill must not raise the existing ground level by more than: - Site area <10,000m^2: 2m - Site area >10,000m^2: 7m			
(c)	Setback of fill near any natural waterbody	- 40m			

Drainage

Clause	Description	Control	YES	NO	N/A
5A.6I	Stormwater Drainage	Stormwater drainage must be connected to: - a public drainage system, or - an inter-allotment drainage system, or - an on-site disposal system.			
		- Must comply with the applicable DCP			

Bushfire

Clause	Description	Control	YES	NO	N/A
5A.6J	Development standards for bushfire prone land	- All relevant bushfire controls have been complied with			

General Standards

Clause	Description	Control	YES	NO	N/A
5A.18(e)	General Standards - glazed facades	- Maximum 50% of any new facade facing a street may be glazed. - Glazed facades facing a street must be low reflective glass			

Gross Floor Area

Clause	Description	Control	YES	NO	N/A
5A.19(2)	Maximum Gross Floor Area	- 10,000m^2			

Floorspace Ratio

Clause	Description	Control	YES	NO	N/A
5A.20	Maximum Gross Floor Area	- Maximum floorspace in an EPI applying to the lot, or - 1:1 where no EPI control			

Landscaped Area

<table>
<tr><th>Clause</th><th>Description</th><th>Control</th><th>YES</th><th>NO</th><th>N/A</th></tr>
<tr><td>5A.20A</td><td>Landscaping requirements</td><td>- Development must comply with landscape requirements of a DCP applying to the land</td><td></td><td></td><td></td></tr>
<tr><td>5A.20B
5A.20B (2)
5A.20B (4)-(8)</td><td>Minimum open space as a percentage of site area
Infill site
Free standing site</td><td>
<table>
<tr><th>Average Height in Storeys</th><th>Free Standing Site[1]</th><th>Infill Site[1]</th></tr>
<tr><td>1</td><td>60%</td><td>50%</td></tr>
<tr><td>2</td><td>65%</td><td>45%</td></tr>
<tr><td>3</td><td>65%</td><td>40%</td></tr>
<tr><td>4</td><td>70%</td><td>35%</td></tr>
<tr><td>5</td><td>70%</td><td>30%</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td>5A.20B (3)</td><td>Infill Site - minimum landscaped area</td><td>50% of open space</td><td></td><td></td><td></td></tr>
<tr><td>5A.20B (4)-(8)</td><td>Free Standing Site - minimum landscaped area</td><td>
<table>
<tr><th>Height in Storeys</th><th>Minimum Landscaped Area[1]</th></tr>
<tr><td>1</td><td>25%</td></tr>
<tr><td>2</td><td>30%</td></tr>
<tr><td>3</td><td>35%</td></tr>
<tr><td>4</td><td>40%</td></tr>
<tr><td>5</td><td>45%</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
</table>

Maximum Height

Clause	Description	Control	YES	NO	N/A
5A.21 (1)	Maximum height where there is a dwelling on an adjacent lot	8.5m			
5A.21 (1A)	Maximum height where no dwelling on an adjacent lot	The lesser of - Maximum height in an EPI applying to the lot, or - 21m where no EPI control			

Setbacks

Clause	Description	Control	YES	NO	N/A
5A.22 (1)	Minimum boundary setback to classified road	- as specified under another EPI, or - 3m,			
5A.22 (2)	Minimum boundary setback where the lot is subject to a proposed future road widening (after acquisition)	- 10m if the widening is for a local road - 3m if the road widening is for a classified road widening, a future classified road widening or a local road future classified road			
5A.22 (3)	Setbacks to boundaries shared with residential uses, where the residential uses are within 3m of the boundary.	- 1.5m setback up to 3m in height[1] - 3m setback from 3m - 6m in height - 4.5m setback above 6m in height			
5A.22 (5)	Setback to boundary with a railway corridor	- 2m			

1. Does not apply if ground floor uses of adjoining lot do not include residential uses along the shared boundary (Clause 5A.22(4)).
2. 5A.22 (1-6) do not apply to existing parts of a building that are being altered or added to (Clause 5A.22(7))

Privacy

Clause	Description	Control	YES	NO	N/A
5A.23	Windows in walls facing residential uses that are 0-6m from the shared boundary	- Privacy screens to any part of the window less than 1.5m above finished floor level			

Garbage and waste storage

Clause	Description	Control	YES	NO	N/A
Schedule 8, Clause 24B	Garbage and waste storage	A garbage and waste storage area must: - be provided, - be located entirely within the lot, - comply with the relevant parts specified in the Codes SEPP in NSW EPA document *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* A garbage and waste storage area must: - be screened, - be located behind the primary building line - not located in any car parking, loading, or landscape area - not located on any side of the building that faces a lot with a dwelling on it.			

Part C: Design Criteria

4A: Orientation and Siting

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4A-1 Setbacks are established by the context and established urban form. Maximum setbacks ensure built form engages with the public domain.	**4A-1.1**	Setback controls: **Free Standing Sites** - Primary road: Max 21m - Secondary road: Max 21m - Site Setback 1: Max 21m - Site Setback 2: Max 21m - Rear Setback: Min 9m **Infill Sites** - Primary road: Max 21m - Secondary road: Max 21m - Site Setback 1: Max 21m - Site Setback 2: Max 21m - Rear Setback: Min 9m **Rear Setbacks adjoining residential uses** - Up to 4.5m height: Min 9m - 4.5m+ height. 45 degree height plane (See Fig 4A.5)			
Objective 4A-2 Buildings are oriented to the street and boundaries, to urban edges, and provide consistent orientation within precincts.	**4A-2.1**	Buildings are oriented to the street, and the principal form follows the boundary orientation.			
	4A-2.2	Buildings align with the predominant established built form alignments, or align to the average of the adjacent setbacks.			
Objective 4A-3 Buildings and sites are designed to preserve the amenity of adjacent public open spaces.	**4A-3.1**	- Developments must not reduce the total area of public open space that receives direct sunlight between 9am to 3pm on June 21 to less than 50% of the site area of that public open space. - Where the area of public open spaces is already less than 50%, new developments must not increase the amount of overshadowing of that space between 9am and 3pm on June 21.			
		Shadow diagrams are provided in the drawing set demonstrating compliance			
	4A-3.2	The building and urban design does not include any blind corners or alcoves that may facilitate concealment or hiding.			

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4A-4 Building siting and orientation responds to the site topography to minimise cut and fill, and the extent of retaining walls where possible.	**4A-4.1**	The ground floor: - Is not more than 1m above ground level on a flat site - For sloping sites, is not more than 1m above ground level at the lower end of the slope, and no more than 1m below ground level at the upper end of the slope.			
	4A-4.2	- Buildings step down with the site slope.			
Objective 4A-5 Site planning minimises the impact on existing vegetation.	**4A-5.1**	Excavation and basement uses, including any carparking, are not provided: - within the prescribed setback areas, - within the drip line of any significant trees marked for retention or under a Tree Protection Order, on the subject site, neighbouring properties, or public land			
Objective 4A-6 Sites with multiple buildings or uses are considered as a whole	**4A-6.1**	Open spaces between buildings include part of the required landscaped area.			
	4A-6.2	Where separation between users is required on sites with co-located uses, it is managed through landscaping and landscaped areas.			
	4A-6.3	Service areas (eg. waste areas, loading, meters etc) are co-located where permissible.			
Objective 4A-7 Site planning minimises the impact of noise from the development on the local context	**4A-7.1**	- Noise generating sources are located, orientated and designed to avoid adversely effecting the local context.			
		- Noise generating sources are physically separated from building uses that would be negatively affected.			

4B: Sites Adjoining Residential

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4B-1 Built form is arranged and sited to minimise impacts on neighbouring residential uses.	**4B-1.1**	Site planning is arranged so that windows and communal open spaces (balconies etc) do not located to not overlook from residential uses			
	4B-1.2	Where the site adjoins residential uses at the rear boundary the built form steps down in scale toward the boundary shared with residential uses			
Objective 4B-2 Development should not reduce the existing Solar Access of neighbouring residential areas.	**4B-2.1**	Retain direct solar access to habitable rooms and private open spaces of neighbouring residential uses for: - a minimum of 2hrs between 9am - 3pm on 21st June. Direct Solar access is defined as a minimum of 1sqm at 1m above the FFL receiving the full 2hrs of daylight.			
		Shadow diagrams are provided in the drawings set demonstrating compliance			
Objective 4B-3 Acoustic Privacy - Noise transfer to neighbouring residential uses is minimised through the siting of buildings and building layout.	**4B-3.1**	Noise generating uses are acoustically screened and located away from residential uses.			
Objective 4B-4 Visual Privacy of neighbouring residential areas is maintained through the orientation and siting of the building, and where required, screening.	**4B-4.1**	Unscreened openings are located on walls not facing residential uses.			
	4B-4.2	Privacy screens are consistent with, and integrated into, the design of the building			

4C: Green Infrastructure

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4C-1 Landscaped areas provide shade, acoustic and visual buffers to main roads, permeable surfaces for stormwater, and attractive additions to sites and structures.	**4C-1.1**	Landscaped areas have a minimum dimension of 1.5m			
	4C-1.4	Any tree under a tree preservation order is identified, retained, and protected during construction.			
		Design drawings identify and label: - any significant or protected trees on the site. - any trees proposed for removal			
	4C-1.5	Landscaping is provided along rear boundaries adjoining residential uses including screening trees.			
Objective 4C-2 Trees provide shade to hardstand areas, building facades, and parking areas; reducing the heat island effect, and mechanical cooling requirements for buildings.	**4C-2.1**	Landscaped areas at side and rear boundaries are planted with trees at 3m intervals along that frontage that are capable of achieving a height of at least 8m and a crown of 4m at maturity and at least 2m within 2 years of the occupation of the development.			
	4C-2.2	On grade car parking with deep soil area (min 2m x 3m) planted with one shade providing tree is provided at the following rates: - 1x tree for every 5 car spaces. - Trees to have a minimum height of 8m and a crown of 4m at maturity.			
	4C-2.3	Trees are distributed evenly throughout the parking area.			
	4C-2.4	Trees within carparking areas are planted in an alternating offset arrangement			
Objective 4C-3 Deep soil zones provide areas on the site that allow for and support healthy plants and trees.		Deep soil zones: - have a minimum dimension of 3m - comprise at least 75% of the landscaped area.			

4D: Public Domain Interface

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4D-1 The development provides activation and passive surveillance to public streets and public open space.	**4D-1.1**	Active uses are located along street frontages.			
	4D-1.2	Clear glazed openings are provided along the street frontage.			
		Infill Sites: Ground floor clear glazing is provided at the following rate: **Primary Road Frontage**: 50% of facade length **Secondary Road Frontage**: 25% of facade length			
	4D-1.3	All publicly accessible external areas of the site are visible from within the building.			
	4D-1.4	Ground floor uses and lobbies have clear, transparent, non-reflective glazing with a predominately unobstructed view from the exterior to a depth of 6m into publicly accessible areas, administration areas, and lobbies.			
Objective 4D-2 Building entries provide employees, customers, and visitors with a welcoming, accessible, entry point.	**4D-2.1**	Building Entries: - are accessible, clearly defined, inviting, and visible from the public domain, - Provide weather protection - Are located on the primary frontage			
Objective 4D-3 Secondary frontages make a positive contribution to the public domain.	**4D-3.1**	Frontages to secondary roads have active edges to the public domain and are integrated with the design.			
	4D-3.2	Secondary frontages have ground floor glazed frontages			
	4D-3.4	Setbacks to secondary frontages are landscaped.			
Objective 4D -4 Building services and essential equipment are integrated with the building design.	**4D-4.1**	Essential services and equipment required to be accessible from the public domain are located: -On the secondary street frontage where possible and permissible, -In services enclosures and cupboards integrated with the building design.			

4E: Site Access

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4E-1 Provide safe and equitable site access for pedestrians, cyclists, and vehicles.	**4E-1.1**	Accessible pedestrian paths from street front boundary to building entry, separated from any vehicular circulation or parking are provided.			
	4E-1.2	Marked crossings where pedestrian access crosses any road or driveway are provided.			
	4E-1.3	An accessible pedestrian circulation path from all car parking areas to building entry is provided separate to any road or drive, adjacent building from carpark to building entry.			
	4E-1.4	Public access is restricted to areas unsafe or unsuitable for public access in the form of fencing or barriers.			
	4E-1.5	Public access is restricted to areas not visible from the public domain outside of business hours.			
Objective 4E-2 The location of vehicular access to the site is a considered part of the urban design of the development.	**4E-2.1**	Vehicular access is included in the site planning			
Objective 4E-3 Entries to basement parking and servicing areas are located and designed to minimise their impact on the public domain.	**4E-3.1**	Entries to basement parking and loading areas are off secondary roads or lanes where available.			
	4E-3.2	Loading Areas: -Are off secondary road where available			
		-Free Standing Sites: Loading areas are at rear of site, behind building line.			
		-Infill Sites: Loading areas are at rear of site, behind building line. Where not possible, locate loading areas including manoeuvring areas for vehicles within building envelope.			

4F: Built Form and Massing

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4F-1 Buildings and sites contribute to a finer grained urban environment through built form articulation and through site links.	**4F-1.1**	The maximum length of unbroken building form is 50m.			
	4F-1.2	On sloping sites, built form steps with the slope of the land at breaks in building form.			
	4F-1.3	Outline how the building has been articulated and/or considered as discrete elements in response to the local context			
	4F-1.4	Outline how the facades of the building have been designed to add visual interest through the building structure, facade design, and signage integration.			

4G: Parking

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4G-1 The visual and environmental impacts of on grade car parking should not dominate the streetscape and should be mitigated through siting and landscaping.	**4G-1.1**	On grade parking areas in front of the building line are limited to a maximum of one double loaded parking aisle.			
	4G-1.2	Carparking areas within the building envelope are screened by active uses to a minimum depth of 6m from the facade for any facade facing the street or public domain.			
Objective 4G-2 The visual and environmental impacts of basement and underground car parking should be minimised.	**4G-2.1**	Basement parking does not protrude more than 1m above ground level.			
		All basement parking above ground level is screened to block views into the basement.			
	4G-2.3	Basement parking with external walls above ground level is naturally ventilated.			
	4G-2.4	Ventilation grills, openings, and screening devices are integrated into the architectural design.			
Objective 4G-3 Carparking areas are safe and secure	**4G-3.1**	Safe pedestrian routes through carparking areas to dedicated pavements and pathways are provided and clearly marked with line markings and protected by bollards where required.			
	4G-3.2	Carparking areas are well lit and comply with all relevant standards, including: - AS/ANZ 1158 Lighting for roads and public spaces - and 'Safer by design' guidelines prepared by the NSW Police.			

<table>
<tr><th>OBJECTIVE</th><th></th><th>DESIGN CRITERIA</th><th>YES</th><th>NO</th><th>N/A</th></tr>
<tr><td>Objective 4G-4
Encourage active transport options with parking facilities for bicycles.</td><td>4G-4.1</td><td>Secure bicycle parking is provided at the following rates:
<table><tr><th>Use</th><th>Employee/ Staff</th><th>Visitors/ Customers</th></tr><tr><td></td><td colspan="2"># spaces/sqm GFA</td></tr><tr><td>Office/business use</td><td>1/150m²</td><td>1/400m²</td></tr><tr><td>Bulky goods/ warehouse</td><td>1/600m²</td><td>1/1000m²</td></tr><tr><td>Shop, retail, cafe</td><td>1/250m²</td><td>1/100m²</td></tr><tr><td>Shopping Centre</td><td>1/200m²</td><td>1/300m²</td></tr></table></td><td></td><td></td><td></td></tr>
<tr><td></td><td>4G-4.2</td><td>Basement parking is located at the uppermost level and near the basement entry.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>4G-4.3</td><td>Visitor and customer parking is located in a publicly visible area close to the main entry point of the building.</td><td></td><td></td><td></td></tr>
<tr><td></td><td>4G-4.4</td><td>Secure bicycle parking is to the following standard:
Employees/Staff: Class 2
Visitors/Customers: Class 3</td><td></td><td></td><td></td></tr>
</table>

4H: Amenity

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4H-1 Commercial buildings provide workplaces or office spaces within a building with good daylight and solar access.	**4H-1.1**	Open office areas, workspaces, and office areas within a building are located no more than 12m from building facades providing natural daylight.			
Objective 4H-2 Buildings use natural cross ventilation to reduce air conditioning usage, and provide healthy work environments.	**4H-2.1**	Design drawings show where natural cross ventilation has been incorporated into the design			
Objective 4H-3 Ceiling heights allow for habitable areas with a high degree of amenity.	**4H-3.1**	The following minimum ceiling heights are provided: **3.6m** Ground Floor retail, workspaces, areas accessible to the public, lobbies **2.7m** Upper Levels - Workspaces, offices, areas accessible to the public **2.4m** Bathrooms, kitchens, storage areas, circulation			
Objective 4H-4 Workplaces provide accessible open space for staff and employees.	**4H-4.1**	A communal open space is provided at a rate of 0.5m^2 per employee accommodated on the site (as defined by the BCA).			
	4H-4.2	Communal open space has a minimum dimension of 3m x 3m and receives 2 hours of direct sunlight between the hours of 9am - 6pm.			
		Shadow diagrams are provided in the drawing set demonstrating compliance			
	4H-4.3	Communal open space is shaded and furnished to accommodate seating and eating.			

4I: Appearance and Materials Criteria

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4I-1 Architectural form is defined by a balanced composition of elements and makes a positive contribution to the urban environment.	**4I-1.1**	- Outline how the design of the building exhibits good proportions and a balanced composition of elements that reflects the building's use, its structure, and internal planning.			
	4I-1.2	- Diagrams, or elevations demonstrating how the aesthetics and composition of the proposed buildings are considered in relation to the surrounding buildings and context are included in the drawing set.			
Objective 4I-2 Plant and equipment is screened and screening elements are integrated into the architectural design	**4I-2.1**	All plant and equipment is screened from view from the public domain, and any residential or mixed use areas.			
	4I-2.2	Ground level plant is located behind the front building line.			
		Rooftop plant is set back from the perimeter and screened for visual privacy and to meet acoustic regulations.			

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4I-3 Material selection contributes to the design of an aesthetically pleasing, durable and resilient commercial building.	**4I-3.1**	Construction materials are robust and durable. This includes materials that are unpainted and pre-finished.			
		Description of materials			
	4I-3.2	Description of how materials have been selected to reflect the surrounding context.			
Objective 4I-4 The building incorporates passive environmental design to reduce energy usage and ongoing costs.	**4I-4.1**	Light coloured roofing materials are used.			
	4I-4.2	North, east, and west facing glazing is shaded by external screens, louvres, or overhangs.			

4J: Water

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4J-1 Water sensitive urban design (WSUD) principles are implemented in the design of the site and building.	**4J-1.1**	Locally-harvested rainwater is be the primary source of non-potable water for developments.			
		List alternative uses for locally harvested rain water (Where non-potable demand within a development site is low) :			
	4J-1.2	Above ground water tanks are integrated into the architecture of the development through material selection or screening.			
	4J-1.3	Impervious areas that are directly connected to the stormwater system are minimised.			
		Runoff from impervious areas such as driveways, paving and rainwater tank overflows are directed onto landscaped areas designed to accept such flows			
	4J-1.4	Plant species native to the Sydney region in water sensitive urban design features and associated landscaping are specified.			

4K: Waste

OBJECTIVE		DESIGN CRITERIA	YES	NO	N/A
Objective 4K-1 Waste and recycling storage areas are integrated with the site planning and building design.	**4K-1.1**	Waste storage areas are screened from view from the public domain, residential and mixed use areas, and carparking areas.			
	4K-1.2	Waste storage areas and collection points are located to the rear of the building or within a basement			
	4K-1.3	Waste collection points are located on-site and: - located on a surface with a gradient less than 1:20, - are not accessed through a security door or gate (unless this is permitted by council's waste policy), - have a path connecting the collection area to the street boundary with a gradient less than 1:8 and free of steps to all for the transfer of bins to the collection vehicle			

Acronyms and Abbreviations

ABCB	Australian Building Codes Board
BCA	Building Code of Australia
BZDG	Business Zone Design Guide
CC	Construction Certificate
CDC	Complying Development Certificate
Codes SEPP	State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
CPTED	crime prevention through environmental design
DA	development application
DCP	development control plan
DPIE	Department of Planning, Environment and Industry
DVS	design verification statement
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Reg	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
FFL	finished floor level
FSR	floor space ratio
GFA	gross floor area
LEP	local environmental plan
LSPS	local strategic planning statement
NABERS	National Australian Built Environment Rating System
NCC	National Construction Code
OSD	on site detention
REF	review of environmental factors
SEPP	State environmental planning policy
WSUD	water sensitive urban design

Glossary of Terms

A selection of important and relevant terms from the Codes SEPP. The full list of terms can be found Clause 1.5

Acid Sulfate Soils Map means a map in an environmental planning instrument that identifies land containing acid sulfate soil.

attached, in relation to a building or structure that is complying development, means not more than 900mm from another building or structure.

boundary wall means a wall that has a setback of 150mm or less from the side or rear boundary of a lot.

building line means the line of the existing or proposed external wall of a building (other than any ancillary development, attached development or detached development) closest to the property boundary adjacent to—
(a) the primary road of the lot, or
(b) in the case of a battle-axe lot, the rear boundary of the dwelling house on the lot in front of the battle-axe lot, or
(c) any other stated boundary of the lot.

bush fire attack level-40 (BAL-40) has the same meaning as it has in AS 3959:2018, Construction of buildings in bushfire-prone areas.

class, in relation to a building or part of a building, has the same meaning as in the Environmental Planning and Assessment Regulation 2000.

common wall means a wall shared between 2 properties.

corner lot means a lot that has 2 contiguous boundaries with a road or roads (other than a lane) that intersect at an angle of 135 degrees or less (whether or not the lot has any other boundaries with a road).

council means the council of a local government area and, in relation to a particular development, means the council of the local government area in which the development will be carried out.

detached, in relation to a building or structure that is complying development, means more than 900mm from another building or structure.

draft heritage conservation area means an area of land identified as a heritage conservation area or place of Aboriginal heritage significance in a local environmental plan that has been subject to community consultation, other than an area that was consulted on before 1 March 2006, but has not been included in a plan before 27 February 2009.

draft heritage item means a building, work, archeological site, tree, place or aboriginal object identified as a heritage item in a local environmental plan that has been subject to community consultation, other than an item that was consulted on before 1 March 2006, but has not been included in a plan before 27 February 2009.

environmentally sensitive area means any of the following—
(a) the coastal waters of the State,
(b) a coastal lake identified in Schedule 1 to State Environmental Planning Policy (Coastal Management) 2018,
(c) land identified as "coastal wetlands" or "littoral rainforest" on the Coastal Wetlands and Littoral Rainforests Area Map (within the meaning of State Environmental Planning Policy (Coastal Management) 2018),
(d) land reserved as an aquatic reserve under the Fisheries Management Act 1994 or as a marine park under the Marine Parks Act 1997,
(e) land within a wetland of international significance declared under the Ramsar Convention on Wetlands or within a World heritage area declared under the World Heritage Convention,
(f) land within 100m of land to which paragraph (c), (d) or (e) applies,
(g) land identified in this or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance,
(h) land reserved under the National Parks and Wildlife Act 1974 or land to which Part 11 of that Act applies,
(i) land reserved or dedicated under the Crown Land Management Act 2016 for the preservation of flora, fauna, geological formations or for other environmental protection purposes,
(j) land identified as being critical habitat under the Threatened Species Conservation Act 1995 or Part 7A of the Fisheries Management Act 1994.

flood control lot means a lot to which flood related development controls apply in respect of development for the purposes of industrial buildings, commercial premises, dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (other than development for the purposes of group homes or seniors housing).

gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4m above the floor, and includes habitable rooms in a basement or an attic, but excludes the following—

(a) any storage area, vehicular access area, loading area, garbage area or services located in a basement,
(b) 1 car parking space per dwelling, including access to the parking space, if—
(i) the dwelling is not a secondary dwelling, and
(ii) the excluded area is not more than 18m2,
(c) any terrace or balcony with outer walls less than 1.4m high,
(d) voids above a floor at the level of a storey or storey above,
(e) any common area intended to be used by occupants of the building to access dwellings on higher or lower storeys of the building such as a stairwell or lift shaft.

heritage conservation area means an area of land identified as a heritage conservation area or a place of Aboriginal heritage significance, including any heritage items situated on or within that area, in an environmental planning instrument.

heritage item means a building, work, archaeological site, tree, place or Aboriginal object identified as a heritage item in an environmental planning instrument.

lane means a public road, with a width greater than 3m but less than 7m, that is used primarily for access to the rear of premises, and includes a nightsoil lane.

parallel road means, in the case of a lot that has boundaries with parallel roads, the road that is not the primary road.

parallel road lot means a lot that has boundaries with 2 parallel roads, not including a lane.

primary road means the road to which the front of a dwelling house, or a main building, on a lot faces or is proposed to face, and includes any road that intersects with that road at an angle of more than 135 degrees and with which the dwelling house or main building has contiguous boundaries.

professional engineer means a person who is—

(a) if legislation is applicable—a registered professional engineer in the relevant discipline who has appropriate experience and competence in the relevant field, or
(b) if legislation is not applicable—
(i) a Corporate Member of the Institution of Engineers, Australia, or
(ii) eligible to become a Corporate Member of the Institution of Engineers, Australia, and has appropriate experience and competence in the relevant field.

protected tree means a tree that requires a separate permit or development consent for pruning or removal, but does not include a tree that may be removed without development consent under this Policy.

secondary road means, in the case of a corner lot that has boundaries with adjacent roads, the road that is not the primary road.

setback means the horizontal distance between the relevant boundary of the lot and the building line.

Standard Instrument means the standard local environmental planning instrument prescribed by the Standard Instrument (Local Environmental Plans) Order 2006.

standard lot means a lot that is not a battle-axe lot, a corner lot or a parallel road lot.

the Act means the Environmental Planning and Assessment Act 1979.

working day means a day other than a Saturday, Sunday or public holiday.

Image Reference List

Page	Project	Architect	Photographer
Cover	5 Murray Rose Avenue	Turner	Brett Boardman
ii-iii			DPIE
iv	Habitat, Byron Bay	DFJ Architects	DPIE
1	Pyrmont Workshop	Bates Smart	Brett Boardman
14	Black Theatre Site Office/ Gadigal Information Services (Koori Radio)	Tonkin Zulaikha Greer Architects	Brett Boardman
A-01	22 William	SJB	Matthew Densley (Images supplied by SJB)