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SCHEDULE 80 TO CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as **DDO80**.

ARDEN PRECINCT - ARDEN CENTRAL INNOVATION

1.0 Design objectives

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To create an innovative urban renewal area that is an exemplar for design excellence, environmental sustainability, and connectivity.

To promote an innovation precinct with floorplates that support digital technology, life sciences, health and education uses.

To support a mixture of low to mid-rise development within the core surrounding the new open spaces with denser and taller buildings to the north and south with a range of typologies to respond to specific land use needs.

To ensure development achieves a high quality pedestrian environment in relation to human scale and microclimate conditions such as acceptable levels of sunlight access and wind.

To ensure that buildings provide visual interest, fine grain and articulation that reduces the impact of mass and bulk.

2.0 Buildings and works

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2.1 Buildings and works for which no permit is required

- A permit is not required:
 - For internal buildings and works, where the Gross Floor Area and overall building height is not increased.
 - For buildings and works at ground level to provide access for persons with disabilities that comply with all legislative requirements.
 - To alter an existing building façade provided:
 - The alteration does not include the installation of an external roller shutter.
 - At least 80 per cent of the building facade at ground floor level is maintained as an entry or window with clear glazing.
 - To construct an awning that projects over a road if it is authorised by the relevant public land manager.
 - To construct a building or construct or carry out works for Railway purposes.
 - For buildings and works to install or modify existing building services, where the overall building height is not increased.

2.2 Requirements

The following outcomes and requirements apply to an application to construct a building or construct or carry out works.

A permit cannot be granted to vary an outcome with the term ‘must’.

A permit may be granted to vary a built form requirement expressed with the term ‘should’.

An application for buildings and works that does not meet a requirement expressed with the term ‘should’ must achieve the relevant built form outcomes.

Any reference to street width is a reference to the proposed ultimate width of the street reserve.

If there is a discrepancy between the diagrams of this schedule and the text, the text should be used.

2.3 Definitions

Floor Area Ratio means the gross floor area above ground of all buildings on a site, including all enclosed areas, services, lifts, car stackers and covered balconies, divided by the area of the site. Voids associated with lifts, car stackers and similar service elements should be considered as multiple floors of the same height as adjacent floors or 3.0 metres if there is no adjacent floor.

Street means a road reserve of a public highway more than 9 metres wide.

Laneway means a road reserve of a public highway 9 metres or less wide.

Street wall means the vertical distance between the footpath or natural surface level at the centre of the site frontage and the highest point of the street wall, with the exception of non-habitable architectural features not more than 3.0 metres in height and building services setback at least 3.0 metres behind the street wall.

Street wall height means the vertical distance between the footpath or natural surface level at the centre of the site frontage and the highest point of the street wall, with the exception of non-habitable architectural features not more than 3.0 metres in height and building services setback at least 3.0 metres behind the street wall.

Setback is the shortest horizontal distance from a building façade, including projections such as balconies and architectural features greater than 300mm, to the boundary.

Additional shadow means any shadow cast outside of any existing shadow from buildings or works.

2.4 Street wall height

Built Form Outcomes

Street walls that:

- Provide a human scale.
- Include an appropriate level of street enclosure having regard to the width of the street with lower street wall heights to narrower streets.
- Respond to the scale of adjoining heritage places.
- Provide adequate opportunity for daylight, sunlight and sky views in the street.
- Do not overwhelm the public realm.
- Minimise visual bulk of upper floors when viewed from streets and laneways.

Built Form Requirements

Buildings should include a street wall of the minimum street wall height and should not exceed the preferred maximum street wall height specified in Table 1 of this schedule unless required to deliver a building typology other than tower-podium.

Where a new building is on a corner, the taller preferred street wall height applies to the frontage with the lower preferred street wall height.

Table 1: Street wall height

Laneway or Street width	Building height	Preferred minimum street wall height	Preferred maximum street wall height
0 to 9 metres	None specified	12 metres	17 metres
Greater than 9 metres	Up to or equal to 41 metres	17 metres	33 metres
	In excess of 41 metres	17 metres	25 metres
Immediately adjacent to a proposed open space	Up to or equal to 41 metres	17 metres	33 metres
	In excess of 41 metres	17 metres	25 metres

2.5

Building Setbacks

Built Form Outcomes

Building setbacks that:

- Contribute to diversity of building typologies and avoid repetitive built form.
- Mitigate wind effects on the public realm.
- Enable adequate daylight and sunlight in streets and laneways.
- Allow sunlight and daylight to, and outlook from habitable rooms in existing and potential developments on adjoining sites.
- Allow for views to the sky between buildings including when viewed from a distance.
- Allow for views and sunlight to Arden Station forecourt.
- Minimise visual bulk.
- Ensure tall buildings do not appear as a continuous wall when viewed from street level.
- Distinguishes between different buildings where a development comprises multiple buildings.

Built Form Requirements

A new building should be setback by the preferred distance as specified in Table 2 from:

- The street,
- Side and rear boundaries,
- Another building(s) on the same site.

Table 2: Built Form Requirements

Part of building	Building height	Preferred minimum setback
Below preferred street wall height	None specified	189-197 Arden Street: <ul style="list-style-type: none"> • 10 metres from Laurens Street Pedestrian only laneway: <ul style="list-style-type: none"> • 9 metres (or if applicable 4.5 metres to the common title boundary)
Above the street wall height	Any height in excess of 33 metres	5 metres

Above preferred street wall height to side and rear boundaries	Above the street wall height and up to 64 metres	7.5 metres
	Above the street wall height and greater than 64 metres up to 81 metres	10 metres
	Above the street wall height and greater than 81 metres	12.5 metres
Building(s) separation on the same site	Up to and equal to 64 metres	12 metres
	Greater than 64 metres and up to and equal to 81 metres	14 – 16 metres
	Greater than 81 metres	18 metres

2.6 Building heights and Floor Area Ratio (FAR)

Built Form Outcomes

Building heights and floor area that:

- Contribute to a varied and architecturally interesting skyline.
- Contribute to a diversity of building typologies and avoid repetitive built form.
- Limit impacts on the amenity of the public realm as a result of overshadowing and wind.
- Limit the impact of visual bulk and mass on the public realm and in the skyline.

Built Form Requirements

Buildings and works should not exceed either the relevant height or Floor Area Ratio specified in Map 1 and Table 3 of this schedule except the following elements may exceed the specified height:

- Non-habitable architectural features not more than 3.0 metres in height.
- Building services and communal recreation facilities setback at least 3.0 metres behind the building façade.

Table 3: Building height and Floor Area Ratio

Location on Map 1	Preferred Maximum Building Height	Preferred maximum FAR
Lot A	25-33 metres	6:1
Lot B	33-57 metres	8:1
Lot C	33-65 metres	8:1
Lot D	49- 81 metres	12:1
Lot E	121–134 metres	17:1

2.7 Solar protection

Built Form Requirements

Buildings must not cast any additional shadow above that cast by the street wall height over the proposed public open space shown in Map 2 of this schedule for the hours specified in Table 4 to this schedule.

These requirements do not apply to buildings and works constructed within the open space.

Table 4: Solar protection

Area on Map 2	Street wall height	Date and hours
Neighbourhood Park	25 metres	22 June, 11am-2pm
Capital City Open Space	<ul style="list-style-type: none"> 25 metres where the overall building height exceeds 41 metres, or 33 metres where overall building height limited to 41 metres 	22 September, 11am-2pm

Buildings should not cast any additional shadow over:

- The proposed public open spaces or streets shown in Map 2 of this schedule for the hours specified in Table 5 to this schedule.

These requirements do not apply to buildings and works constructed within the open space.

Table 5: Solar protection

Area on Map 2	Date and hours
Queensberry Street linear park	22 September, 11am-2pm
Arden Station Forecourt	22 September, 11am-2pm

2.8 Wind Effects

Built form outcomes

Buildings must be designed to achieve local wind conditions that maintain a safe and pleasant pedestrian environment on footpaths and other public spaces for walking, sitting or standing.

Built form requirements

Buildings and work higher than 30 metres:

- Must not cause unsafe wind conditions as specified in Table 6 in publicly accessible areas including spaces identified with solar protection within the assessment distance from all facades.
- Should achieve comfortable wind conditions as specified in Table 6 in publicly accessible areas within the assessment distance from all facades.

The assessment distance is show in the figure below and is the greater of:

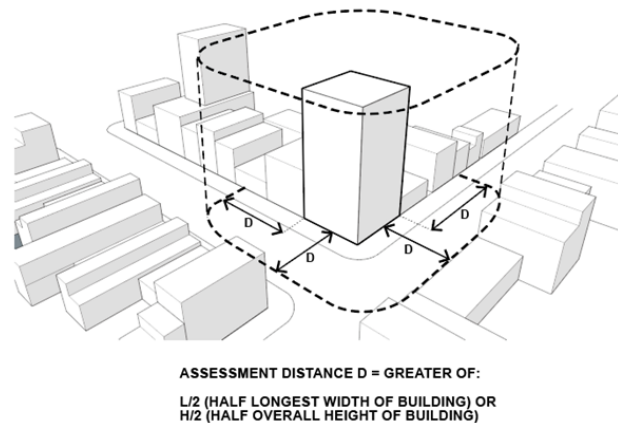
- Half the longest width of the building.
- Half the total height of the building.

Table 6: Wind effects on the public realm

Wind condition	Specification
Comfortable wind conditions	<p>The hourly mean wind speed from all wind directions combined with a probability of exceedance of 20 per cent, is less than or equal to:</p> <ul style="list-style-type: none"> • 3 metres/second for sitting areas

	<ul style="list-style-type: none"> • 4 metres/second for standing areas • 5 metres/second for walking areas <p>Hourly mean wind speed is the maximum of:</p> <ul style="list-style-type: none"> • the hourly mean wind speed the gust equivalent mean speed (3 second gust wind speed divided by 1.85).
Unsafe wind conditions	The hourly maximum 3 second gust from any wind direction (considering at least 16 wind directions) with a corresponding probability of exceedance percentage greater than 20 metres per second.

Figure 1



2.9 Public interface and design detail

Built Form Outcomes

Buildings and works that:

- Address and define existing or proposed streets or open space and provide direct pedestrian access from the street to ground floor uses.
- Support the activation of streets and laneways through the use of transparent glazing and pedestrian entrances.
- Create activated building facades with windows and legible entries.
- Consolidate services within sites and within buildings, and ensure any externally accessible services are integrated into the façade design.
- Position vehicle access, loading areas and services so that they are not located on main street frontages.
- Position entries, circulation and services to respond to the function of adjoining main streets, streets and laneways for development with more than one street frontage.
- Resolve the street interface where finished floor levels are raised in response to flooding, including direct connections at grade to usable space within the ground level with level transitions contained within the building envelope.
- Provide pedestrian amenity on main routes, including consideration of weather protection from rain, wind and sun without causing detriment to the streetscape integrity.
- Consider pedestrian flow, safety and amenity, which is prioritised over vehicle access and minimise conflict where possible.
- Provide for high quality pedestrian links as identified to provide direct pedestrian connection where appropriate.

- Ensure services located on a street do not dominate the pedestrian experience and are designed as an integrated component of the façade.

Built Form Requirements

Buildings should provide design elements specified in Table 7 to this schedule.

Table 7: Public interface and design detail

Design Element	Requirement
Laneways, through-links, pedestrian and cycling connections	<p>Provide for laneways, through links, and connections as identified in Map 3.</p> <p>Pedestrian only laneways to be open to the sky and 9 metres in total width in accordance with setback requirements specified in Table 2.</p> <p>Internal links are to be 9 to 12 metres in total width and include a proportional void commensurate with its width.</p> <p>All other identified links should be 6 to 9 metres in width (the width shared from the common title boundary) should be of high quality, whether open to the sky or internal arcades.</p>
Active street frontages	<p>5 metres or 80 per cent of the building facade at ground floor level should be an entry or display window.</p> <p>Any service area should not exceed a length of 10 metres to any frontage.</p> <p>In flood prone areas, transitions in floor levels should not rely on external stairs, ramps or platform lifts which disconnect interior spaces from the public realm unless otherwise agreed by the relevant floodplain management authority.</p>
Traffic conflict frontages	<p>Vehicle and loading bay ingress or egress points, should not be constructed on a traffic conflict frontage as identified in Map 4.</p> <p>Vehicle access, crossovers and entries to parking should include intermediate pedestrian refuges if the vehicle access or crossover is more than 6.1 metres.</p>
Weather protection	<p>Buildings which front the traffic conflict frontages shown at Map 4 provide weather protection over the footpath unless it demonstrated it is not required.</p> <p>Weather protection should be designed to:</p> <ul style="list-style-type: none"> • Be between 3.5 to 5 metres in height to provide enclosure to the public realm. • Not enclose more than one third of the width of a laneway.

2.10

Adaptable Buildings

Built Form Outcomes

Buildings and works that:

- Provide for the future conversion of those parts of the building accommodating non-employment uses to employment uses including the ability to adapt car parking to other uses over time.
- Development minimises the impact of car parking on the public realm.

Built Form Requirements

Buildings should provide design elements specified in Table 8 to this schedule.

Table 8: Adaptable Buildings

Design Element	Requirement
Adaptable Buildings	Lower levels up to the height of the street wall

	<p>At least 5.0 metres floor to floor height at ground level.</p> <p>At least 3.2 metres floor to floor height for other lower levels up to the height of the street wall associated with accommodation uses.</p> <p>At least 4 metres floor to floor height for other lower levels up to the height of the street wall associated with office uses.</p> <p>Any proposed parking structures above ground level must be designed to be sleeved with active uses to streets. These structures should incorporate appropriate floor to floor heights which are level to enable future adaptation including at least 2.8 metres floor to floor height. Mechanical parking systems to reduce the area required for car parking.</p>
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2.11 Exemption from notice and review

An application to construct a building or carry out works is exempt from the notice requirements of section 52(1)(a), (b) and (d), the decision requirements of section 64(1), (2) and (3) and the review rights of section 82(1) of the Act.

3.0 Subdivision

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None specified.

4.0 Signs

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None specified.

5.0 Application requirements

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The following application requirements apply to an application for a permit under Clause 43.02, in addition to those specified elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority:

Urban Context Report and Plans

- An application for permit must be accompanied by a written and illustrated urban context report. The urban context report must:
 - explain the key planning, design and contextual considerations and influence on the proposed buildings and works.
 - describe the existing urban context of the area in which the proposed buildings and works are to be located.
 - explain how the proposed buildings and works relate to and respond to their urban context including:
 - built form character of adjacent and nearby buildings.
 - equitable outcomes for potential development on adjoining sites.
 - adjacent and nearby heritage places.
 - identify the key opportunities and constraints supporting the design response.
 - explain the effect of the proposed buildings and works, including on:
 - microclimate, including sunlight, daylight and wind impacts on streets and other public spaces.
 - vistas.
 - explain how the proposed buildings and works respond to each of the Built Form Outcomes of this schedule, as appropriate.
- Plan, elevation and section drawings (1:50 or 1:20) and written statement to demonstrate the design of the lower levels of the building to show articulation, how the building mass provides architectural interest and diversity of materiality and show

building entries, shop front design, service doors or cabinets, ingress and egress (if applicable), and weather protection canopies.

- Plans, elevations and section drawings (1:50) for any car parking proposed at or above ground level to show finished floor levels and a statement by a suitably qualified engineer are to be provided to demonstrate the capacity for this to be adapted to alternative uses.
- A concept landscape plan for any publicly accessible podium and rooftop spaces detailing proposed hard and soft landscape elements, plant schedule, plant container details and maintenance and irrigation systems.
- Key view line diagrams which show the development in context from short and distant views, including from the Neighbourhood Park, Capital City Open Space, Arden Station forecourt, the rail corridor and CityLink. Key view line diagrams which show the development in context from short and long distant views towards Arden Station forecourt.
- Scaled shadow diagrams to show existing and proposed shadows diagrams at hourly intervals to demonstrate the effect on identified spaces to provide solar protection including an analysis against the Winter Solstice (22 June), if not the control period, to demonstrate the degree of sunlight to the space.

Wind analysis report

- An application for a permit for a building with a total building height in excess of 30 metres must be accompanied by a wind analysis report prepared by a suitably qualified person. The wind analysis report must:
 - explain the effect of the proposed development on the wind conditions in publicly accessible areas within a distance equal to half the longest width of the building, measured from all facades, or half the total height of the building, whichever is greater.
 - at a minimum, model the wind effects of the proposed development and surrounding buildings (existing and proposed) using wind tunnel testing.
 - identify the principal role of each portion of the publicly accessible areas for sitting, standing or walking purposes.
 - not rely on street trees or any other element such as screens, within public areas for wind mitigation.

Design Excellence

- An application for permit must be accompanied by a report to demonstrate design excellence. The report must:
 - explain how the application provides high quality architecture, landscape architecture and urban design which demonstrates function, liveability, sustainability, and public contribution to buildings and urban spaces.
 - explain how the application responds to the requirements of this schedule.
 - describe how the development addresses and provides high quality public realm outcomes, particularly around Arden station, and ameliorates solar and wind effects to the forecourt.
 - where an application seeks to vary the requirement(s) of this schedule, it must explain how the Built Form Outcomes are achieved, and how the alternative response demonstrates appropriate built form outcomes having regard to the decision guidelines of this schedule.
 - demonstrate the utilisation of a design review process or design competition where the application exceeds the preferred Maximum Floor Area Ratio.

3D digital model of buildings and works

- An application for a permit must be accompanied by a 3D digital model of the proposed buildings and works in a format to the satisfaction of the responsible authority. The model may be used for assessing overshadowing and visual impacts caused by the proposal and for general archive, research and public information purposes.

6.0

Decision guidelines

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The following decision guidelines apply to an application for a permit under Clause 43.02, in addition to those specified in Clause 43.02 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

General

- The extent to which the development addresses the Built Form Outcomes and Requirements in this schedule.
- Whether the cumulative effect of the proposed development in association with adjoining existing and potential development supports a high quality of pedestrian amenity in the public realm (footpaths and key pedestrian routes), in relation to human scale and microclimate conditions including overshadowing and wind impacts.
- On sites where a development comprises multiple buildings, whether the buildings adopt a diversity of forms, typologies and architectural language, within a cohesive design framework.
- Whether the building respects the height, scale and proportions of adjoining heritage places.
- Whether the development responds to its context including built form character of adjacent and nearby buildings, equitable outcomes for potential development on adjoining sites and adjacent and nearby heritage places.

Street wall height

- The streetscape, including its width, the scale and height of proposed neighbouring buildings and the proposed development.
- Whether the proposed street wall height provides variegation in heights to provide visual interest to pedestrians and human scale.
- If the proposed street wall height, exceeds the preferred maximum height specified, the development should demonstrate that the proposed street wall height:
 - is proportional to the street width,
 - supports an alternative building typology,
 - provides articulation, visual interest and variety over the length of the street frontage.

Building Setbacks

- Whether the building setbacks to street or an adjoining building proposed appropriately consider the:
 - built form response on site including consideration of the size and shape of the parcel of land to which the application relates,
 - the siting of the proposed development and the areas to be occupied by the development in relation to the size and shape of the land,
 - relationship to adjoining sites and consideration of the potential redevelopment opportunities,
 - building mass and views to the development at short range and distant views, including from the Neighbourhood Park and Capital City open space, Arden Station forecourt, the rail corridor and CityLink.

- articulation, visual interest and breaks up buildings into sections and a range of parapet heights, and/or introduction of shape to taller forms.
- Whether the development provides a high level of amenity for building occupants in relation to:
 - daylight to all habitable rooms
 - Privacy to all habitable rooms
- The effect of the proposed buildings and works on solar access to proposed open spaces and public places.

Building Height and Floor Area Ratio

- Whether the building height responds to the site and provides variation in building height compared with adjacent existing or proposed development.
- Whether the building height provides transition to lower scaled areas adjacent.
- Whether the development would compromise the function, form and capacity of public spaces and public infrastructure.
- Whether the intensity of development appropriately responds to other requirements of this schedule and does not seek to vary all other requirements in order to reach the nominated Floor Area Ratio of the site.
- If the development seeks to exceed the nominated Building Height and/or Floor Area Ratio that the development demonstrates:
 - all side and rear building setback requirements specified in Table 2 of this schedule are met. An application with multiple buildings on the same site must meet the side and rear boundary setback requirements as specified in Table 2 of this schedule. This is to provide greater setbacks with greater height and cannot rely on the reduced building separation distances within Table 2 of this schedule.
 - all comfortable wind condition requirements specified in Table 6 (wind effects) of this schedule are met.
 - all active frontage requirements specified in Table 7 (Public interface and design detail) of this schedule are met.
 - all adaptable building requirements specified in Table 8 (Adaptable Buildings) of this schedule are met.
 - additional built form above the preferred maximum Building Height and/or Floor Area Ratio in Table 3 mitigates the impact of walled effect and bulk through building setbacks and shaping of tower forms.
 - demonstration of exemplary design excellence through high quality architecture, landscape architecture and urban design for the site as supported, where appropriate, by an independent design review or design competition that endorses the proposed outcomes for the site.
 - no adverse shadowing impacts to identified spaces for solar protection including consideration of Winter Solstice (22 June), even if not the specified control period, to consider the extent of shadow caused to that space including its use and function.
 - will result in improved internal amenity, reduced external amenity impacts, enhanced architectural composition, and /or better representation of urban structure.

Solar Protection

- Whether the additional overshadowing to the nominated space adversely affects the use, quality and amenity of the public space.
- The degree to which shadowing can be minimised or move quickly from the space within the defined sunlight control period.

- The area of additional overshadowing relative to the area of remaining sunlit space compared to the total area of the public space.
- Any adverse impact on the natural landscaping, including lawn or turf surface in the public space.
- Whether the additional overshadowing compromises the existing and future use, quality and amenity of the public space.
- Whether allowing additional shadows on other public spaces such as streets and lanes, is reasonable, having regard to their orientation.

Wind Effects

- Whether the proposal maintains safe and pleasant pedestrian microclimatic conditions on the footpath adjacent to the development and demonstrates:
 - A maximum of 3 metres per second for sitting which is associated with activities such as outdoor cafes, pool areas, gardens.
 - A maximum of 4 metres per second for standing which is associated with activities such as window shopping, drop off, queuing.
 - A maximum of 5 metres per second for walking adjacent to the development.
- The cumulative wind effects within the assessment area which is greater than half the longest width of the building or half of the height of the building, including public spaces subject to solar protection, Neighbourhood Park, Capital City Open Space, Queensberry Street linear park and Arden Station forecourt.

Public Interface and Design Detail

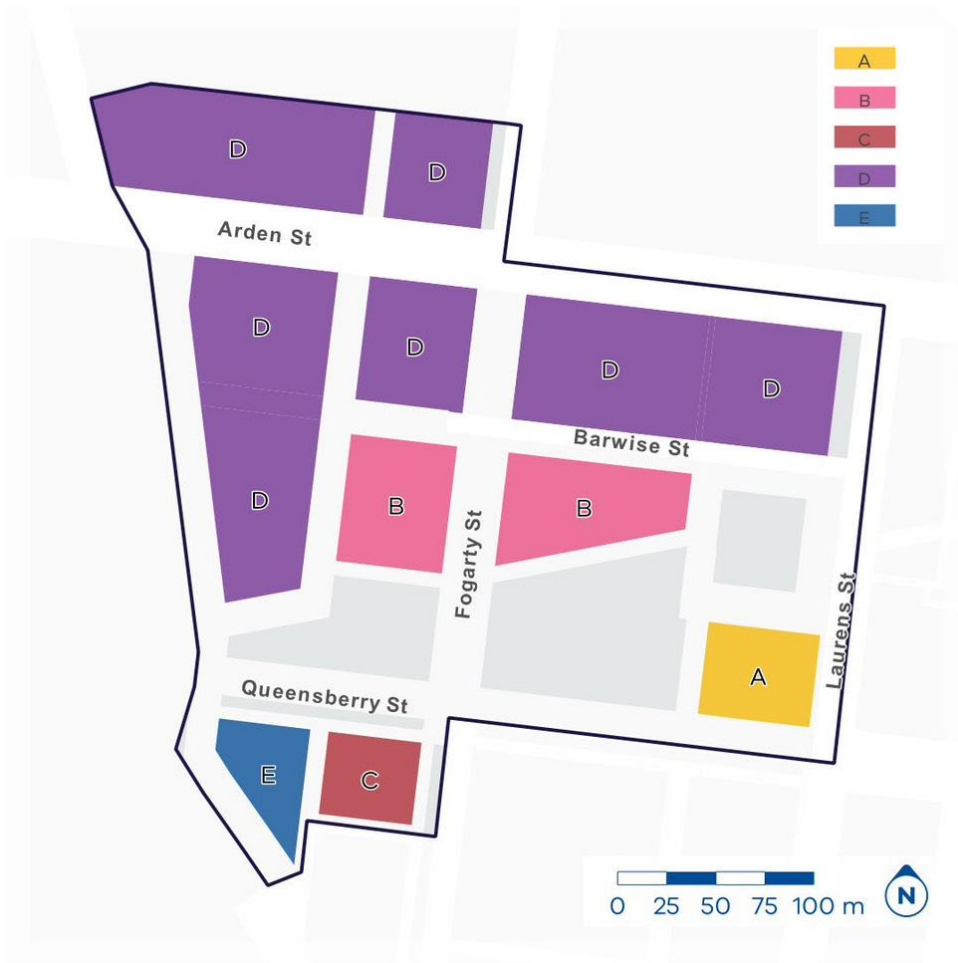
- The appropriateness of the through-links and laneways having regard how:
 - Direct, attractive, well-lit and provide a line of sight from one end to the other.
 - Safe and free of entrapment spaces and areas with limited passive surveillance.
 - Publicly accessible for extended hours, at ground level and appropriately secured by legal agreement.
 - Adopt vertical proportions with a height greater than the width.
 - Incorporate activity where possible.
 - Incorporate high quality exterior grade materials and finishes to all surfaces including paving, walls, ceilings and lighting.
 - Have highly legible entries including any doors or gates.
- Whether the application provides high quality human scaled environments at ground level that provides visual interest, comfortable scale and safe edge to the public realm.
- The appropriateness of active street frontages including integration of required servicing into the façade away from key pedestrian spaces and public spaces, colocation of service cabinets internal to loading, waste or parking areas where possible, and resolving interaction with the public realm to address the views of the relevant floodplain management authority.
- Configuration and design service cabinets to not dominate street frontages and employ high quality materials.
- Whether the proposed ingress and egress location is appropriate having regard to:
 - the intended use of that street and having regard to constraints for site access from other frontages.
 - the extent to which the proposed ingress or egress would conflict with pedestrians or cyclists.
 - be limited in number and consolidated to provide shared access to multiple buildings.

- consider impacts on bicycle and public transport infrastructure, on-street parking and loading and unloading facilities.
- Whether the development incorporates appropriate weather protection to key streets for pedestrians:
 - at an appropriate depth and provide a rhythm that reflects the grain of the ground floor uses adjacent.
 - display a high design standard including material selection in the appearance of the soffit and fascia.

Adaptable Buildings

- Whether the development allows for the adaptive re-use of existing buildings.

Map 1: Building Height and Floor Area Ratio



Map 2: Solar Protection



Map 3: Laneways, through-links, pedestrian and cycling connections



Map 4: Weather Protection and Traffic Conflict Frontage

