



Australian Government
National Capital Authority

Urban Design Guidelines for **Perimeter Security** in the National Capital



Urban Design Guidelines for Perimeter Security in the National Capital

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National Capital Authority

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1. Introduction

Australia is a strong and vigorous democracy, open and free.

Australia's capital, Canberra, symbolises and articulates national identity, achievement, aspiration and culture. It houses the major institutions, symbols and collections of federal parliamentary democracy, and the key agencies of national government.

Australia has been on a heightened level of security alert since the terrorist attacks of 11 September 2001 in New York and Washington and Bali in 2002.

Detailed plans are in place for governments and security agencies to respond to terrorism, and governments are working with managers of critical facilities – including national institutions – to prepare plans for protection.

Security and protection plans often require that vehicles are prevented from entering areas in or near critical infrastructure.

The National Capital Authority has prepared these *Urban Design Guidelines for Security in the National Capital* to encourage high quality design solutions that integrate building security into the landscape of public areas.



Figure 1:

Hastily erected jersey barriers at the Russell Defence precinct, Canberra

These *Guidelines* aim to protect Canberra's democratic, welcoming and internationally renowned landscape and vistas while facilitating enhanced security. They demonstrate that a safe and secure urban environment can be created in ways that enhance rather than diminish the qualities of public spaces. They show alternatives to the temporary responses seen in other capitals and recently in Canberra. Ad hoc measures such as hastily erected barriers more suited to protecting temporary road works, concrete planter boxes discordant with surrounding landscape, guard huts marking main entrances, and unco-ordinated road closures mar beauty, detract from symbolism, and reduce the appearance if not the reality of freedom in our democratic society.

The Australian Bomb Data Centre of the Australian Federal Police and Australian Security Intelligence Organisation (ASIO) have contributed to the development of these guidelines.

1.1. The National Capital Authority

The National Capital Authority is established under the *Australian Capital Territory (Planning and Land Management) Act 1988*.

The National Capital Authority secures the Commonwealth's continuing interest in the planning and development of the National Capital, and manages cultural landscapes and commemorative elements within significant national areas.

The Authority's vision is a National Capital which symbolises Australia's heritage, values and aspirations, is internationally recognised, and worthy of pride by Australians. Its mission is to build the National Capital in the hearts of all Australians.

1.2. Purpose of Guidelines

These *Urban Design Guidelines for Perimeter Security in the National Capital* provide design solutions for building perimeter security with a suite of elements that enhance streetscapes and building settings. The Guidelines recognise that effective defences against terrorist attack includes multiple layers of security, extending from such measures as enhanced airport security through to building design and the management of access to sensitive precincts and buildings. The Guidelines address protection from vehicle-borne threats, and promote physical measures that can be taken within or adjacent to building grounds to provide protection from vehicles without detriment to the amenity of public areas. They do not address threats which may be posed by pedestrians, air attack, or chemical or biological weapons.

1.3. Specific Areas covered by Guidelines

The *Guidelines* focus on specific areas for which the National Capital Authority has land management responsibility or for which it must provide works approval. These include:

- the Parliamentary Zone;
- the Russell Defence precinct; and
- Barton (including York Park).

Within these areas there is a range of nationally significant government buildings and complexes such as Parliament House, the Defence Headquarters and the High Court of Australia.

The Guidelines can also be applied to other locations where security is required such as the diplomatic estates.



Figure 2: Parliamentary Zone, Barton and York Park, and Russell

2. Objectives of the Guidelines

The objectives of the *Guidelines* include:

- provision of appropriate perimeter security for sensitive buildings against vehicle-born threats;
- integration of security with streetscape elements, rather than having separate fixtures whose only purpose is security;
- a suite of structural and landscape features that provide perimeter security while maintaining excellence in urban design;
- a coherent strategy, guided by the Authority, through which security is achieved without sacrificing urban design quality;
- perimeter security without compromise to the National Capital's commerce or vitality, pedestrian or vehicular mobility; and
- assurance that landscape and streetscape treatments or structures do not detract from heritage values.

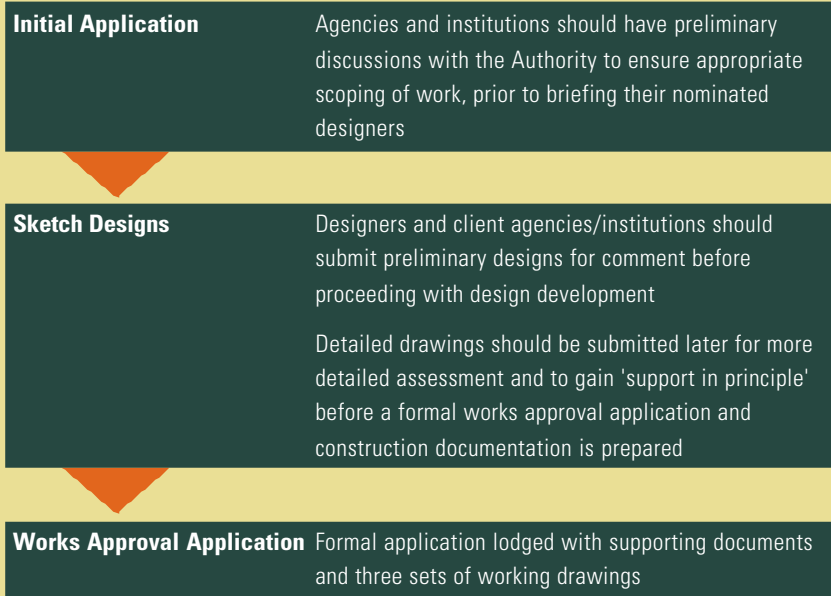
3. Using the Guidelines

All works undertaken in the Parliamentary Zone, Russell and Barton (including York Park) require the approval of the National Capital Authority. While the *Guidelines* are intended to apply to these areas they may also be used in other locations in the Territory or in other cities or sensitive locations where improved security is required.

These Guidelines provide:

- Guidance for Commonwealth agencies, cultural institutions or private sector building owners seeking to improve security measures for their buildings;
- Guidance for public and privately funded security works within public areas, including streetscape and local area traffic works;
- A decision-making framework for the Authority when considering approval of these works.

In areas where the Authority has responsibility for works approval the following process is recommended:



4. Security Performance

4.1. Stand-off Distances

Stand-off distance is critical in perimeter security design. The distance will normally be the distance between the building and the nearest point to which unauthorised vehicles have access. Larger stand-off distances offer greater protection.

Most buildings in the Parliamentary Zone and Barton are well set back from streets. In the Parliamentary Zone, buildings are generally freestanding in a parkland setting. However, in the Russell Defence precinct, buildings are closer to streets and parking areas.

The wide avenues and clear streets of central Canberra may allow unimpeded approach at high-speed to barriers serving as building-perimeter protection. In these cases, travel speeds may be restricted by modifying approaches to the barriers, or the barriers will have to be designed to have sufficient strength to stop heavy vehicles travelling at speed.

Buildings can be strengthened to enhance security and blast resistance. This depends on the structural characteristics of each building and is outside the scope of these *Guidelines*.

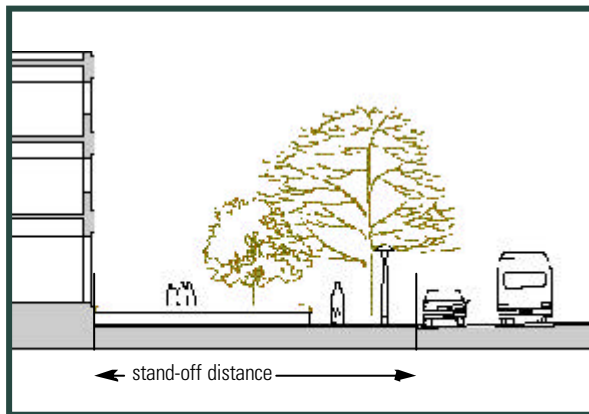


Figure 3: Indicative stand-off concept

4.2. Security Zones

Security zones between building and streets include the building grounds, the verge/footpath and the kerb or parking lane. Most measures are implemented either within the building grounds or in the verge/footpath zone.

Design of streetscapes and landscapes is intended to establish or reinforce distinctive urban character and improve amenity. Building perimeter security should be incorporated into the streetscape or landscape design. A number of elements are proposed including lights, walls, plinths, fences, planters, seats, trees, hedges and bollards, all of which can be appropriately strengthened or supplemented to serve as physical barriers to vehicles while improving the amenity of public spaces.

Some solutions may be suitable in all areas; others are appropriate only in particular settings.

Figures 4 and 5 illustrate a suite of security elements developed by the National Capital Planning Commission for Washington. The Washington elements are generally applicable to its urban areas. Canberra needs elements designed to suit the unique character of its streets and precincts.

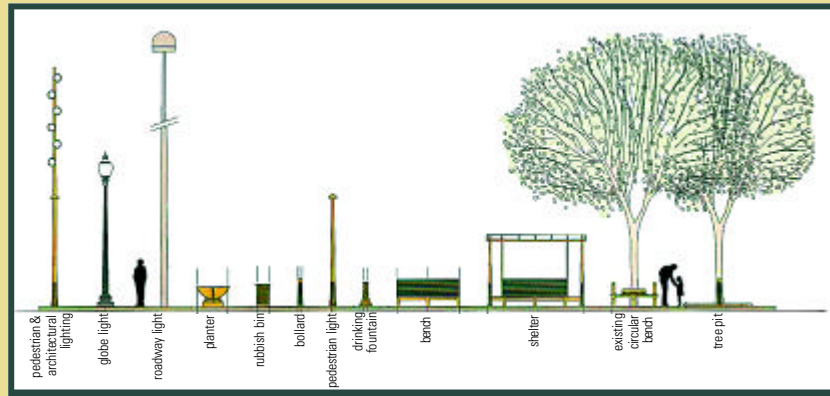


Figure 4: Streetscape security element suite (NCPC, 2002¹)



Figure 5: Security elements in urban areas (NCPC, 2002²)

(a) Building grounds

Building grounds between the footpath and the building typically consist of lawn and trees or shrubs. Entry paths and roads cross these areas.

Security measures within the building grounds should complement the architecture and landscape design. In most cases, where buildings are set back from their front property boundary the security measures should be located near the outer edge of the grounds. A typical solution could be a barrier designed as a raised plinth or wall, keeping the footpath and verge free of security elements.

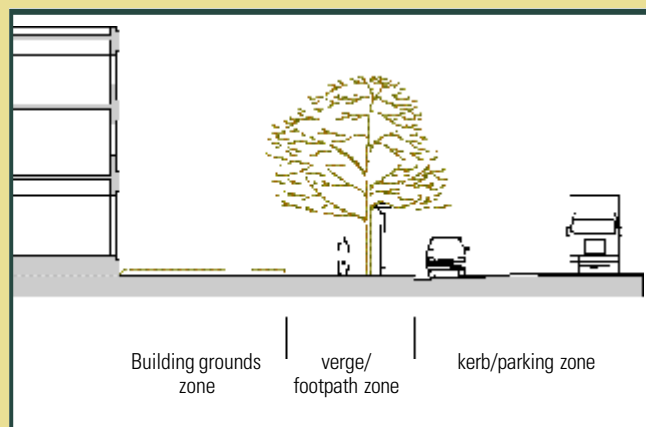


Figure 6:
Security zones

1 & 2 National Capital Planning Commission (NCPC). 2002. Draft National Capital Urban Design and Security Plan.
National Capital Planning Commission: Washington DC



Figure 7:
Building Grounds
zone

(b) Verge/footpath

The footpath/verge zone is located between the block boundary and the kerb. In most cases, the footpath/verge serves as the common space for interaction, movement and activity. To the greatest extent possible, verges and footpaths should be left open and freely accessible for pedestrian movement.

Security elements should be placed close to the kerb while allowing car doors to open and pedestrian movement from the car to the footpath. Parking meters, streetlights, benches, planters, and garbage bins are familiar elements found at or near the kerb. Strengthened versions of these could be designed to enhance perimeter security.

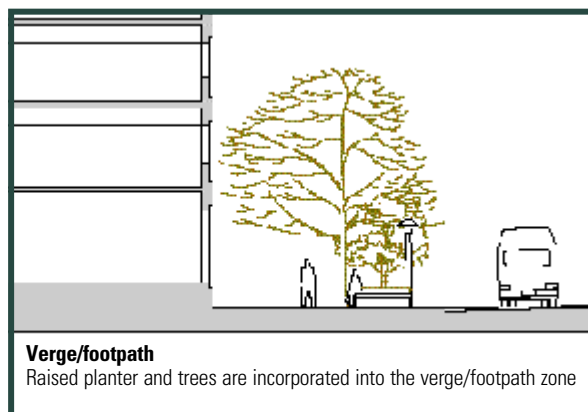


Figure 8:
Verge/footpath zone

(c) Kerb/parking lane

Parking, passenger drop-off, cycling, bus stops, taxi ranks, and loading zones are often in the kerbside lane.

Kerbside parking should be removed only as a last resort where the need for additional secure distance is required for buildings requiring the highest levels of security. Before kerbside parking is removed, the parking needs of the area and adjacent buildings should be assessed and adequate replacement parking provided.

5. Urban Design Framework and Streetscape Security

The Parliamentary Zone, Barton and York Park, and the Russell Defence precinct are three distinctive zones – each with unique urban design characteristics – in which there is a recognised need for perimeter security. Within these zones, the characteristics of three distinct types of street – main avenues, connector streets and local streets – guide the formation of design principles.

5.1. Street Types

Generally, each street has some common characteristics, including the widths of carriageways and verges or footpaths. Other aspects, such as the relationship of buildings to the street, may vary along the length of a street. Each street – especially each main avenue – is a unified, continuous and coherent space; design should emphasise the whole rather than the parts.

(a) Main avenues

Main avenues connect and define the most important parts of the city. Commonwealth Avenue, Kings Avenue and Constitution Avenue (which define the National Triangle), Brisbane Avenue, State Circle and Sydney Avenue are examples of main avenues. The avenues frame vistas to buildings, monuments and landscapes that symbolise the National Capital and the importance of the Seat of Government.

(b) Connector streets

Connector streets have particular spatial qualities, provide access from main avenues to important national buildings, monuments and landscapes, and link major avenues. King Edward Terrace, King George Terrace, National Circuit and Macquarie Street are examples of connector streets.

(c) Local streets

The function of local streets is confined to providing direct access to specific sites. Blackall Street and Parkes Place are examples of local streets.

5.2. Context

(a) Parliamentary Zone



Figure 9:
The Parliamentary Zone

Parliamentary Zone Principles

The Parliamentary Zone is the symbolic heart of the National Capital and is at the geometric centre of the Walter Burley Griffin Plan for Canberra.

The Federal Parliament on Capital Hill, together with Federation Mall and Old Parliament House, place the Parliamentary Zone at the centrepiece of Australian government.

As envisaged by the founders of the Capital, the Zone represents the physical manifestation of the seat of Commonwealth Government under the Australian Constitution – a Government empowered by a free people. It is also the home to the nation's most important cultural and government institutions.

The *Parliamentary Zone Master Plan* in the *National Capital Plan* guides development in the Zone. The Statement of Principles in the Master Plan require that:

The Parliamentary Zone will be given meaning as the 'place of the people,' accessible to all Australians so that they can more fully understand and appreciate the collective experience and rich diversity of this country.

To do this, the place of the people must reflect:

- *The political and cultural role of Australia's Capital;*
- *Federation and Australian democracy;*
- *The achievements of individual Australians in all areas of endeavour;*
- *The diversity of Australia, its peoples, natural environments, cultures and heritage; and*
- *The unique qualities of Australian creativity and craftsmanship.*

The place of the people must have:

- *A sense of scale and dignity and openness;*
- *A cohesive and comprehensible layout;*
- *A large forum for public ceremony and debate;*
- *Intimate, enjoyable spaces for individuals and groups;*
- *A dynamic program of national, state and regional events; and*
- *Public facilities that are accessible and affordable.*

(b) Barton and York Park



Figure 10:
Barton and York Park

Barton and York Park occupy a prominent site in the Central National Area and contribute to the urban form and landscape features that give the National Capital its special character and setting. These areas provide part of the backdrop and approaches to Parliament House and form the eastern edge to the National Triangle. Barton and York Park assume a key role in the daily functions of government, providing prestigious sites for major government departments and headquarters of major national associations. Through the role of departments and associations based in Barton and York Park receiving visiting officials and dignitaries, the area has a significant international profile.

Kings, Brisbane and Sydney Avenues and State Circle and National Circuit provide main address points. Windsor Walk provides a secondary address and set-down point.

(c) Russell

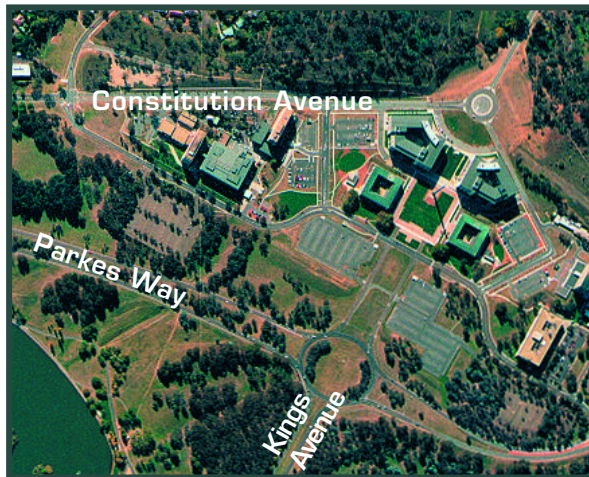


Figure 11:
Russell

The Russell Defence precinct is an area of special national significance, located at the north-eastern apex of Griffin's National Triangle. Occupying a magnificent setting between Lake Burley Griffin and the inner hills, Russell acts as a counterpoint to the city centre of Civic and is visible from a number of important vantage points. The main access routes are Kings Avenue, Parkes Way, Morshead Drive, Constitution Avenue, and Northcott Drive.

Russell houses the headquarters of the Australian Defence Forces and is an integral part of the physical and symbolic network of defence-related institutions that include the Australian War Memorial, Campbell Park Offices, the Australian Defence Force Academy and the Royal Military College, Duntroon.

5.3. Urban Design Frameworks

Perimeter security should reinforce the existing or intended streetscape character and setting for buildings. Some characteristics of streets may vary along their length. In areas of the Parliamentary Zone, some buildings are located in park-like settings (eg the National Gallery). In areas of Russell, and Barton and York Park, buildings are located closer to the street and the character is more urban. This urban design framework identifies the existing or future streetscape character in the following broad categories:

(a) Urban streets

In urban streets, buildings are built close to street boundaries and generally frame the street. There is typically more pedestrian activity in urban streets and, consequently, verges contain broad paved footpaths.



Figure 12:
ACT Magistrates Court is built to the edge of Knowles Place with a broad paved verge.

(b) Landscape streets

In landscape streets, buildings are generally located further back from the street and the landscape is the dominant element. While the foreground of buildings is generally grass, trees and hedges, the buildings have a direct relationship to the street and provide a degree of enclosure to it.

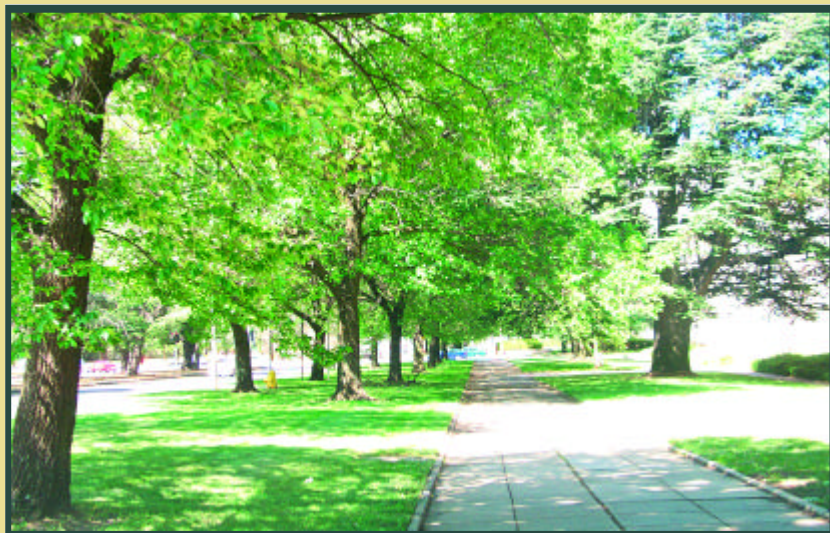


Figure 13:
Kings Avenue, Barton – a landscape street

(c) Park setting

Park settings are where buildings are located in a park-like setting and have little relationship with the street. The emphasis of urban design in perimeter security for buildings in a park setting is to reinforce the scenic landscape qualities of the setting of the buildings.

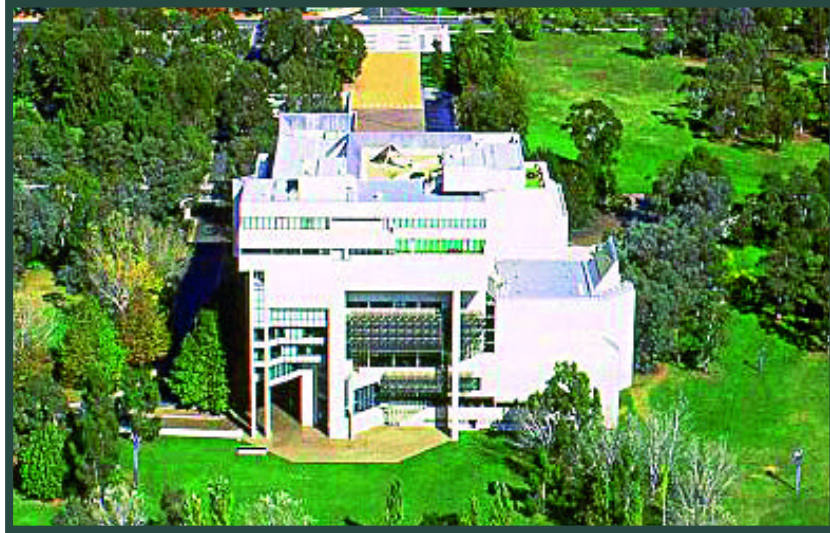
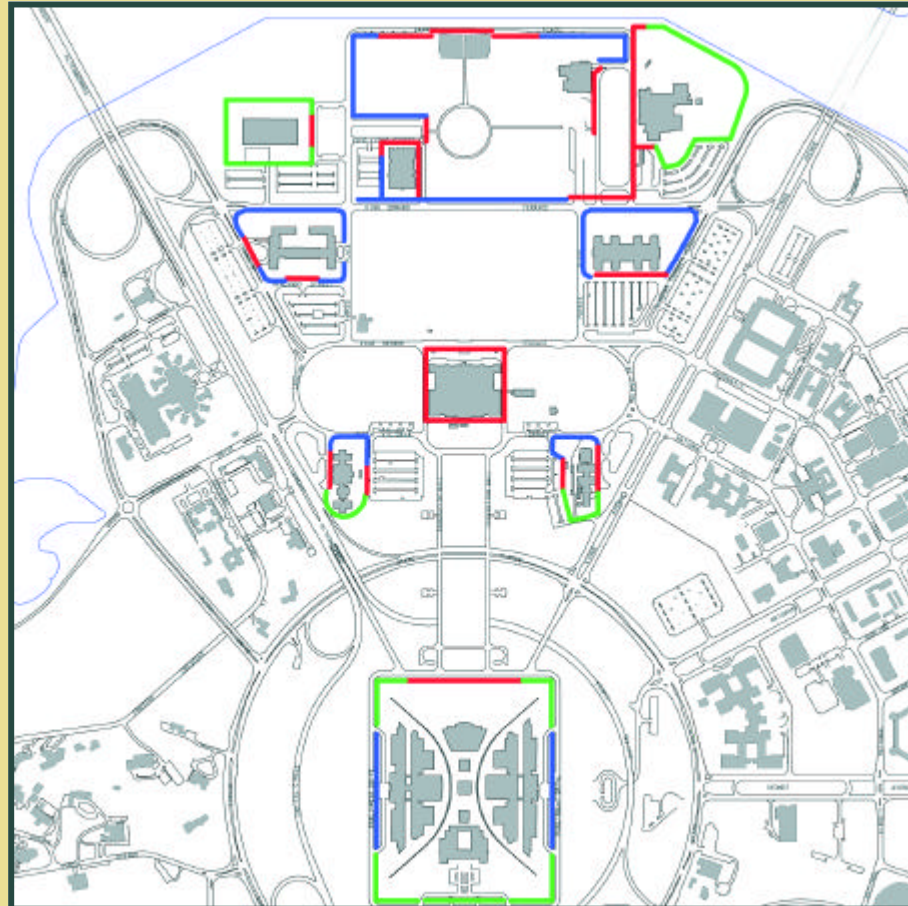


Figure 14:
The High Court of Australia, Parkes
located in a park setting

5.4. Urban Design and Security Concept Plans

The existing or intended character of the Parliamentary Zone, Barton and York Park, and the Russell Defence precinct has been mapped using the categories of *urban street*, *landscape street* or *park setting*. This is shown in *Figures 15 a, b, c and d*.

Figure 15 (a): Parliamentary Zone

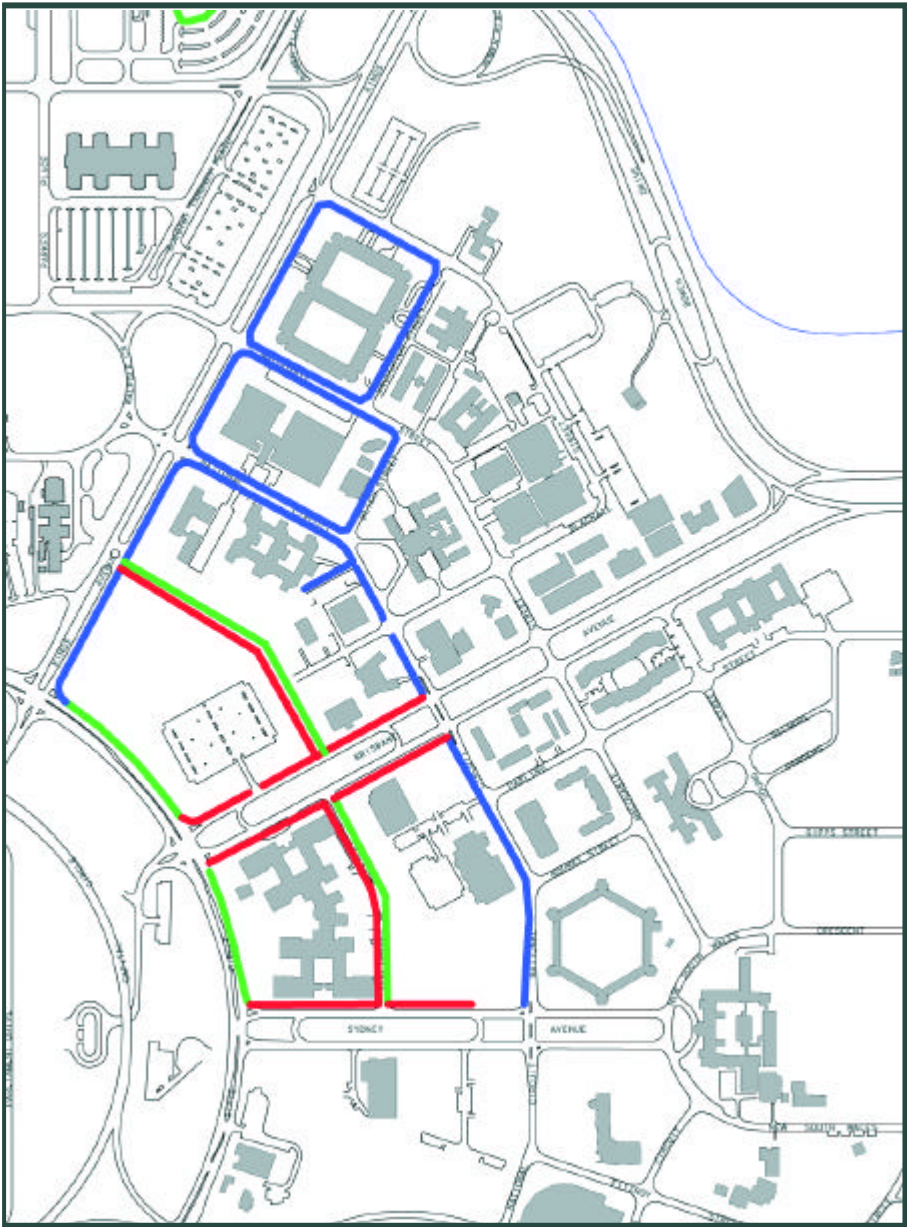


— Landscape streets

— Urban streets

— Park setting

Figure 15 (b): Barton and York Park



- Landscape streets
- Urban streets
- Park setting

Figure 15 (c): Russell current

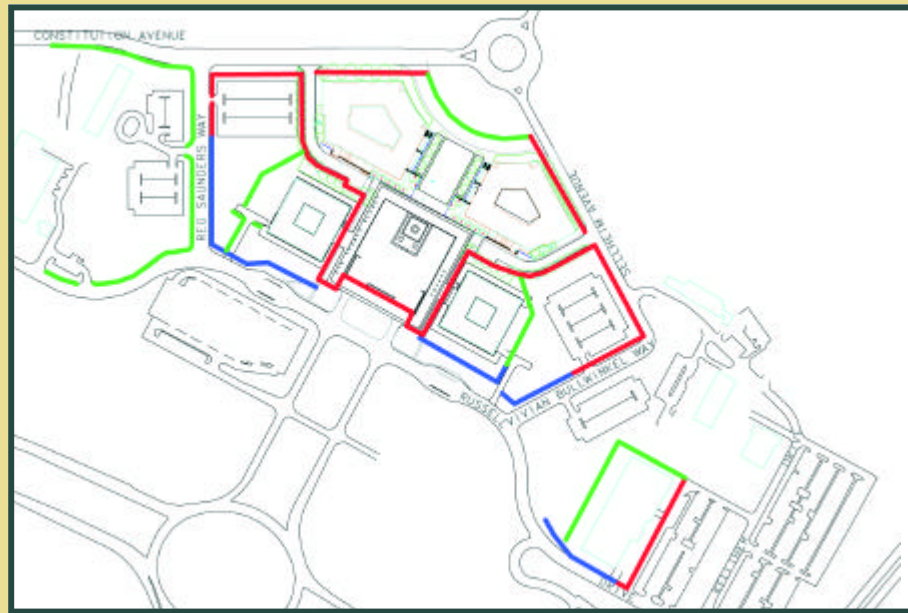
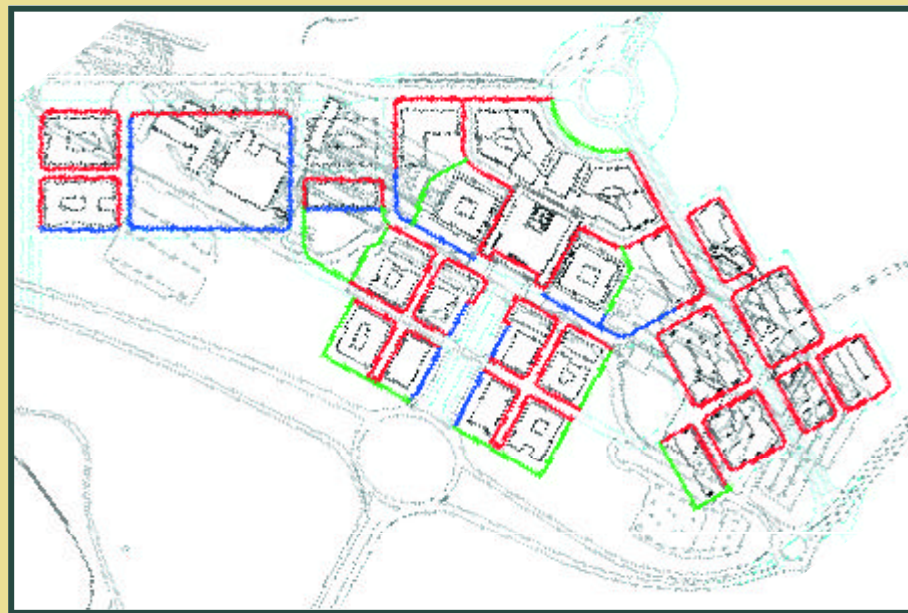


Figure 15 (d): Russell future



- Landscape streets
- Urban streets
- Park setting

5.5. Suite of Security Responses

A suite of perimeter security elements has been prepared for each of the settings (fig.16). Some elements, such as bollards and raised planters, are suitable for use in all settings, whereas others are appropriate only in specific locations. Existing examples of some elements are shown in *Figure 16*. These can be used or adapted for a specific streetscape or security project.

Figure 16: Suite of Security Elements



Raised Planter
This element is suitable in *Urban, Landscape and Park settings*



Stone Bollards
Suitable in *Urban, Landscape and Park settings*



Bollards and Flagpole
Suitable in *Urban, Landscape and Park settings*



Plinth wall and ramp
Suitable in *Urban, Landscape and Park settings*

Figure 16: Suite of Security Elements *(continued)*



Chamfered low wall with street name

Suitable in *Landscape* and *Park* settings



Massive bollards

Suitable in *Urban*, *Landscape* and *Park* settings



Drainage Depression

Suitable in *Park* settings



Low Plinth Wall

Suitable in *Urban*, *Landscape* and *Park* settings

Figure 16: Suite of Security Elements *(continued)*



Streetlight With Concrete Base
Suitable in *Urban, Landscape* and *Park setting*



Line of Elements
Suitable in *Urban settings*



Low Wall in Planting
Suitable in *Landscape* and *Park settings*



Seating
Suitable in *Park settings*

Figure 16: Suite of Security Elements *(continued)*



Bollard Seats

Suitable in *Urban, Landscape and Park settings*



Large Planter Pots

Suitable in *Urban settings*



Park Fence

Suitable in *Urban, Landscape and Park settings*



Seating in Low Wall

Suitable in *Urban, Landscape and Park settings*

Figure 16: Suite of Security Elements *(continued)*



Low Wall With Building Name
Suitable in *Landscape* and *Park* settings



Bollard and Fence
Suitable in *Urban*, *Landscape* and *Park* settings

Figure 17: Security Elements Matrix

Situation

Urban streetscape

Security Elements

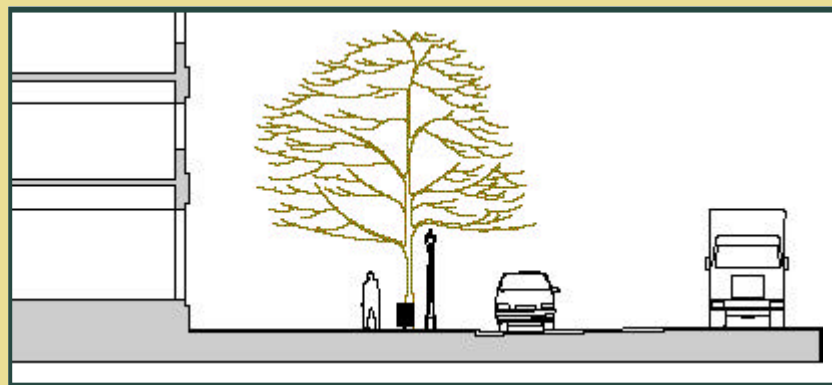
Suite of hardened streetscape elements:

- | | | | |
|-----------------|----------------------|----------------|------------------|
| ■ bollards | ■ bollard & chain | ■ seats | ■ raised planter |
| ■ street lights | ■ bins | ■ plinth wall | ■ bus shelter |
| ■ bicycle racks | ■ large planter pots | ■ street trees | |

Location

Adjacent to kerb line keeping generous clear footpath area for pedestrian movement.

Generally no closer than 1.5m from kerb line to allow car doors to open.



Adjacent to kerb

Situation

Landscape streets

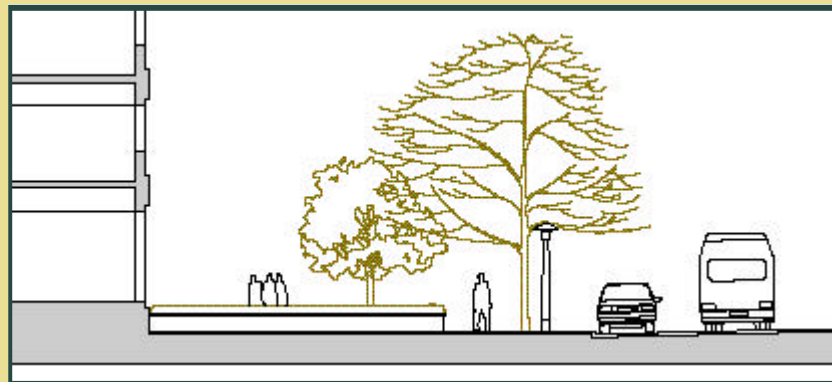
Security Elements

Suite of elements:

- | | | | |
|------------------|---------------|------------|------------------------|
| ■ raised planter | ■ bollards | ■ hedges | ■ bollards in planting |
| ■ trees | ■ plinth wall | ■ low wall | ■ bus shelter |

Location

On or adjacent the street/block boundary within the building grounds allowing sufficient openings to allow for pedestrians to enter buildings.



Within the building grounds

Situation

Park Setting

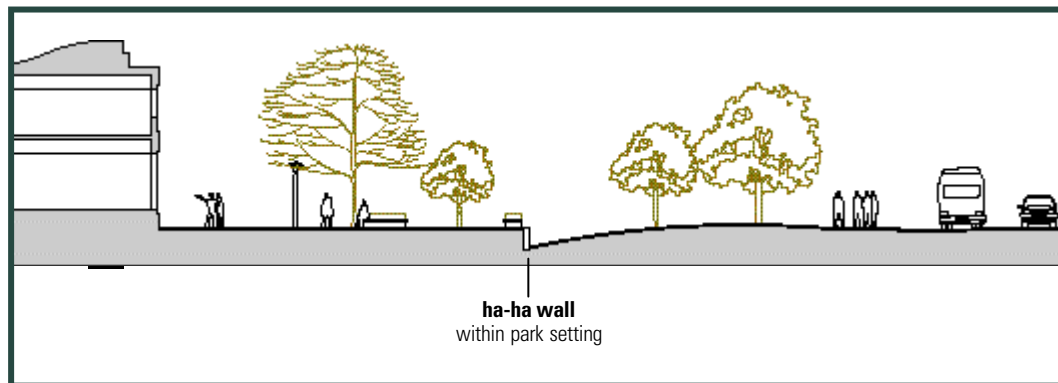
Security Elements

Suite of elements:

- | | | | |
|---------------|----------------------|----------------------------------|--------------|
| ■ bollards | ■ mass tree planting | ■ hedges | ■ ha-ha wall |
| ■ garden wall | ■ raised planter | ■ masonry and metal picket fence | |

Location

In accordance with design for the park or building curtilage.



Reference List

National Capital Planning Commission (NCPC). 2002. *Draft National Capital Urban Design and Security Plan*. National Capital Planning Commission: Washington DC

National Capital Authority (NCA). Updated 2002. *National Capital Plan – with amendments*.

National Capital Authority: Canberra.



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