Part D Section 18
Bella Vista and Kellyville Station Precincts
# Table of contents

1 **Introduction** ......................................................................................................................... 6  
   1.1 Land to which this Section applies ....................................................................................... 6  
   1.2 Purpose of this Section ......................................................................................................... 6  
   1.3 Relationship to other Sections of the DCP ......................................................................... 7  

2 **Vision and Principles** ............................................................................................................. 8  
   2.1 Vision ................................................................................................................................... 8  
   2.2 Development principles ....................................................................................................... 8  

3 **Desired Character and Structure Plans** .............................................................................. 12  
   3.1 Desired Character – Bella Vista Station Precinct ................................................................ 12  
   3.2 Bella Vista Station Precinct Structure Plan and Key Elements ......................................... 15  
   3.3 Desired Character – Kellyville Station Precinct ................................................................. 19  
   3.4 Kellyville Station Precinct Structure Plan and Key Elements ........................................... 20  

4 **General Development Controls** ........................................................................................... 24  
   4.1 Movement network and design ........................................................................................... 24  
   4.2 Open space network ............................................................................................................ 32  
   4.3 Public domain ..................................................................................................................... 35  
   4.4 Solar Access and Overshadowing ...................................................................................... 38  
   4.5 Wind .................................................................................................................................. 38  
   4.6 Public Art ............................................................................................................................ 39  
   4.7 Integrated Water Management ............................................................................................ 40  
   4.8 Subdivision and earthworks ............................................................................................... 44  
   4.9 Cut and Fill ......................................................................................................................... 45  
   4.10 Ecologically sustainable development .......................................................................... 46  
   4.11 Ecology and riparian corridors ......................................................................................... 48  
   4.12 Safety & security .............................................................................................................. 49  
   4.13 Heritage (Aboriginal and European) ............................................................................... 50  

5 **Local Centre & Business Development** ............................................................................. 51  
   5.1 Desired layout and character .............................................................................................. 51  
   5.2 Setbacks, building layout and design ................................................................................. 53  
   5.3 Active Street Frontages ....................................................................................................... 56  

6 **Residential** .......................................................................................................................... 58  
   6.1 Residential flat buildings and shop top housing ................................................................. 58  
   6.2 Terrace housing (attached housing) .................................................................................. 77  

7 **Car and bicycle parking** ....................................................................................................... 85  
   7.1 Car parking ......................................................................................................................... 85  
   7.2 Bicycle parking .................................................................................................................. 86  

Draft September 2017
**List of Figures**

**Figure 1**  Land to which this Section applies................................................................. 6
**Figure 2**  Approach to Housing Diversity ........................................................................ 8
**Figure 3**  Office Development, Docklands Melbourne....................................................... 9
**Figure 4**  Neighbourhood Park ...................................................................................... 10
**Figure 5**  Public Plaza with Green Space Source: Wentworthville Centre Planning and Place Making Strategy, Holroyd City Council .................................................. 11
**Figure 6**  Public Domain in Employment Area, Barcelona ................................................ 12
**Figure 7**  Pedestrian Mall, Melbourne ............................................................................. 13
**Figure 8**  Mixed use development, Sydney ..................................................................... 13
**Figure 9**  Example Active Uses along Streets ................................................................. 13
**Figure 10**  Residential Development, New Acton ........................................................... 14
**Figure 11**  Residential Development, Sydney ................................................................. 14
**Figure 12**  Bella Vista Structure Plan ............................................................................... 17
**Figure 13**  Bella Vista Public Plaza .................................................................................. 18
**Figure 14**  Pedestrian Creek Crossing in Jacobs Ridge, Queensland Source: Bella Vista Station Precinct Proposal, NSW Planning and Environment ......................................................... 18
**Figure 15**  Street through Employment Area Connecting with Elizabeth Macarthur Creek .................................................................................................................. 19
**Figure 16**  Reserve Adjoining Green Square .................................................................... 19
**Figure 17**  Residential Development, Sydney ................................................................. 20
**Figure 18**  Residential Development, Sydney ................................................................. 20
**Figure 19**  Kellyville Structure Plan .................................................................................. 22
**Figure 20**  Kellyville Public Square ................................................................................... 23
**Figure 21**  Small Courts under Skytrain ......................................................................... 23
**Figure 22**  Indicative Street Network and Hierarchy – Bella Vista Precinct ...................... 25
**Figure 23**  Indicative Street Network and Hierarchy – Kellyville Precinct ....................... 26
**Figure 24**  Existing and Proposed Cycleway Network – Bella Vista Precinct ................. 27
**Figure 25**  Existing and Proposed Cycleway Network – Kellyville Precinct .................... 28
**Figure 26**  Profile 1 – Local Street..................................................................................... 29
**Figure 27**  Profile 2 – Local Street (mostly along Elizabeth Macarthur Creek Corridor) .................................................. 30
**Figure 28**  Profile 3 – Enhanced Collector ......................................................................... 31
**Figure 29**  Landscaping in Roundabout .......................................................................... 32
**Figure 30**  Landscaped Median ....................................................................................... 32
**Figure 31**  Example Children’s Play Facilities, Green Square ........................................... 33
**Figure 32**  Artist Impression of Local Park ........................................................................ 33
**Figure 33**  Artist Impression of open space associated with Elizabeth Macarthur Creek ........................................................................................................................................ 35
**Figure 34**  Example Town Square, Rouse Hill ................................................................ 37
**Figure 35**  Public Space for Workers & Visitors ............................................................... 37
**Figure 36**  Public Space for Workers & Visitors, Rhodes .................................................. 37
**Figure 37**  Ben Chifley forecourt of Chifley Tower ............................................................ 39
**Figure 38**  Public Art, Boston ............................................................................................ 39
**Figure 39**  Music Garden ................................................................................................. 40
**Figure 40**  Rouse Hill Square ........................................................................................... 40
**Figure 41**  Aerial view of Elizabeth Macarthur Creek ..................................................... 44
**Figure 42**  Green Roof to individual flats ........................................................................... 47
**Figure 43**  Green Wall at 1 Bligh Street, Sydney ............................................................... 47
**Figure 44**  Green Wall at ‘The Met’ .................................................................................... 47
**Figure 45**  Greened residential flat building ..................................................................... 49
**Figure 46**  Green roof in the city ....................................................................................... 49

Draft September 2017
List of Tables
Table 1  Key elements ........................................................................................................................ 15
Table 2  Key elements ........................................................................................................................ 21
Table 3  Open Space Requirements – Bella Vista Precinct ................................................................. 33
Table 4  Open Space Requirements – Kellyville Precinct ................................................................. 33
Table 5  Water Quality and Stream Erosivity Performance Objectives ........................................... 41
Table 6  Soil / groundwater parameters recommended for adoption in MUSIC modelling ............ 42
Table 7  Recommended Stormwater Quality Parameters for MUSIC modelling ......................... 42
Table 8  Setbacks for Residential Flat Buildings and Shop Top Housing ...................................... 63
Table 9  Noise criteria ....................................................................................................................... 75
Table 10 Car parking rates – all land uses ....................................................................................... 85
Table 11 Bicycle Parking rates ........................................................................................................ 86
1 Introduction

This Section establishes a framework and controls to guide development in the Bella Vista Station Precinct and the Kellyville Station Precinct (the Precincts).

1.1 Land to which this Section applies

This section applies to the land within the Bella Vista Station Precinct and the Kellyville Station Precinct (refer following figure).

![Figure 1: Land to which this Section applies](image)

1.2 Purpose of this Section

The purpose of this section of the DCP is to guide the future development of the Bella Vista Station and Kellyville Station Precincts by identifying the vision, development principles, key elements and indicative structure for the future development of the precinct. It seeks to ensure the orderly,
efficient and environmentally sensitive development of the precinct to achieve high quality urban design outcomes.

1.3 Relationship to other Sections of the DCP

This section forms part of The Hills Development Control Plan 2012 (DCP 2012). Development within the Bella Vista Station and Kellyville Station Precincts will need to have regard to this section of the DCP as well as other relevant controls in DCP 2012. In the event of any inconsistency between this section and other sections of DCP 2012, this section will prevail to the extent of the inconsistency.
2 Vision and Principles

2.1 Vision

The Bella Vista Station and Kellyville Station Precincts are proposed to become an attractive and well connected neighbourhoods that achieve housing targets, create vibrant, safe and desirable places, reinforce the garden shire character and lifestyle, and are supported by necessary infrastructure. It is anticipated the Precincts will provide up to 10,800 additional dwellings and 11,600 additional jobs by 2036. In order to meet this vision, future development within the Precinct must achieve the following key principles and strategic priorities.

2.2 Development principles

To achieve the vision, future development within the Precincts must address the following key principles and strategic priorities of Council:

Housing Diversity

As the population grows there will be greater reliance on higher density development to accommodate future housing demand. The expected characteristics of the Hills Shire population will continue to include a variety of household types including singles, couples and a high proportion of households with children. It will be critical that future high density development provides ‘dwelling diversity’ to ensure the market caters for the different living needs, expectations and household budgets within the community. This will require the provision of an appropriate mix of one, two and three bedroom apartments which are varied in size.

Apartment buildings are long term building stock so it is very important that if they are to be built, they are resilient over the long term. Unlike detached housing where landowners can choose the style and size of their home, a homeowner wanting an apartment can only choose from what is being provided. Whilst smaller apartments should be provided to meet the needs of a certain demographic within the market, moderate and larger apartments should also be provided to meet the latent demand for this housing option. This will then reduce pressure on smaller, more affordable housing options.

In order to achieve appropriate housing diversity within the Corridor, a floor space incentive provision has been included within The Hills Local Environmental Plan 2012 which permits additional floor space for developments that provide the required mix of apartment types and sizes (refer Figure 2). Further information on housing diversity is also provided as Appendix A.

![Figure 2](draft.png)
**Employment Outcomes**

A significant growth in population will require a corresponding increase in employment opportunities to meet demand and provide more jobs close to homes. Sufficient land has been zoned for employment uses to meet the targeted number of new jobs. However, it will be important to ensure that opportunities for jobs growth are protected and that employment potential is not lost due to pressure for residential development in the shorter term.

The Shire’s resident labour force is educated and the majority are employed as professionals, managers or clerical and administrative workers. However a high proportion of these residents travel outside the Shire to access higher order employment opportunities that meet their skill set and qualifications. Development within the rail corridor presents an opportunity to address the current imbalance between the available jobs and the skills of residents, and ensure that new populations can access high quality professional employment close to where they live.

The rail corridor will be an attractive location for commercial businesses to locate being close to the existing Norwest Business Park, highly accessible by road and public transport and in close proximity to a highly skilled labour force. The planning controls will further attract businesses by facilitating quality spaces and facilities for workers and visitors including active streets that promote commercial, retail and business activity and town squares and plazas that provide spaces for informal meetings, recreation and dining.

![Figure 3 Office Development, Docklands Melbourne](source: Urban Melbourne, urban.melbourne/projects/docklands/one-melbourne-quarter-2-aurora-lane-docklands)

**Transit oriented development**

Transit oriented development (TOD) involves the creation of compact, walkable, mixed-use communities around public transport nodes. A key goal of TODs is to increase the number of people who walk, cycle or use public transport as their main form of transport. TODs have densities that result in increased patronage of public transport and provide more opportunities for people to live near the station and reduce their reliance on vehicles.

The need to locate high density housing in centres with good access to services, community facilities and transport is well recognised and will support the on-going operation of the Sydney Metro Northwest. Density at the core allows for a scale and character suitable for pedestrian connectivity.

Draft September 2017
Centres should provide a mixture of residential, retail and commercial activities that are centred around transport and create an environment where services, recreation, entertainment, jobs and housing provide a lifestyle alternative to the traditional suburban context, consistent with the principles of TODs.

This DCP Section supports the provision of TODs by helping to deliver the highest densities in key strategic locations close to centres and existing and proposed transport infrastructure. This will ensure a sensible balance can be achieved between delivering on housing targets whilst ensuring an appropriate transition in residential densities and maintaining residential character.

**Infrastructure and open space**

Public open spaces play an important role in urban areas including provision of recreation, environmental conservation, connecting people with nature and improving social and mental health.

The expected additional population of approximately 24,000 people across the Bella Vista and Kellyville Precincts will increase demand for various public facilities and services (such as roads, community facilities, open space and the like). The future population should be provided with access to open space, recreation and community facilities in line with the lifestyle enjoyed by existing residents.

There is a need to vastly improve open space networks to meet the demands generated by incoming population and ensure appropriate recreational opportunities are provided for the future population. A number of local and neighbourhood parks are required in key locations that will be connected through dedicated shared ways along all streets providing a high level of amenity for both pedestrian and cyclists. Public plazas and town squares in the areas surrounding the stations and upgrades to open spaces outside of the precincts provide further opportunities for active and passive recreation.
Place Making

Place making will be a key focus in order to provide neighbourhoods that are sustainable, accessible, safe, attractive and well serviced with a unique character and sense of place. The development controls will require the ingredients that make neighbourhoods liveable including vibrant activity centres, permeable and safe movement networks, generous public spaces, high quality built form and public art and ecologically sustainable development. The provision of quality spaces including streets, parks, buildings, and other public spaces will invite greater interaction between people and foster healthier, more social and economically viable communities.

Development will occur through a master planning process to deliver a cohesive character for each precinct with high levels of amenity and attractive and usable public spaces. The master plans will need to identify the provision of public areas which will enhance the liveability of the precincts. Public areas such as informal gathering areas within centres will include high quality and durable elements such as seating, shading and lighting to enhance the amenity of these areas. Streets will be well connected incorporating shared pedestrian/cycleways. The precinct will incorporate new public domain treatments including new paving, new street furniture and lighting, improved pedestrian access and dedicated street tree planting.

Quality built form plays a vital role in achieving liveable, productive and resilient environments and creating great places that people want to live, work, visit and invest in. Development which achieves the key principles and meets with the development controls in this DCP will ensure an exemplary standard of design that provides a positive contribution to the public realm. A design excellence clause has also been included within The Hills Local Environmental Plan 2012 to require certain buildings to be assessed by a design excellence panel to achieve quality built form outcomes for the precincts.

Figure 5  Public Plaza with Green Space  
Source: Wentworthville Centre Planning and Place Making Strategy, Holroyd City Council
3 Desired Character and Structure Plans

3.1 Desired Character – Bella Vista Station Precinct

There are three key character areas within the precinct:

Employment Areas
The employment areas will be attractive, walkable and thriving commercial office destinations with good connectivity to the Bella Vista Station and access to amenities including cafes, restaurants, services, public plazas and urban spaces that provide places for workers and visitors to eat, relax and socialise. Public areas such as plazas and informal gathering spaces, distributed throughout the employment areas, will contain high quality elements including street furniture, public art and landscaping.

Buildings immediately surrounding the station will be characterised by high-rise urban form with active street frontages. The built form will transition to lower-rise, larger floorplate buildings with landscaped setbacks near the edges of the employment areas towards Balmoral Road and Old Windsor Road. Buildings will comprise quality architectural features such as green walls to limit bulk and scale and provide visual interest.

The employment areas will be easily accessible from the station and there will be good connectivity between the employment and mixed use areas. Upgraded pedestrian connections, cycleways and road infrastructure throughout the precinct will improve accessibility within and between the employment areas and surrounding mixed use and residential areas.

Figure 6 Public Domain in Employment Area, Barcelona
Mixed Use Areas
The mixed use areas will be urban, lively and pedestrian friendly comprising a range of retail, commercial, residential and community uses. Active retail uses and outdoor dining will be provided on the ground level of most buildings to stimulate activity in the public domain and there will be office premises and some residential apartments at upper levels. Public spaces including a pedestrian mall and retail plaza will provide attractive and inviting areas for residents, workers and visitors. Malls and plazas will include attractive and functional features such as water fountains, landscaping, seating, shading and lighting and could include areas suitable for markets or public performances.

Areas closest to the station will be characterised by compact, tall buildings with active street frontages. Upper residential floors will be setback from the street to provide visual interest and increase amenity for residents. Buildings will transition to lower heights and a more residential character further north and east of the station, particularly adjoining the Elizabeth Macarthur Creek Corridor. Development will capitalise on the relationship with Elizabeth Macarthur Creek providing good connectivity to and addressing and integrating with the corridor wherever possible. Buildings will be visually interesting and provide a human scale by incorporating varied setbacks, quality architectural features and a variety of colours and materials.

Residential Areas
The residential areas will be green and walkable, providing a lifestyle alternative to the traditional suburban context, focused highly on an appropriate scale and an attractive environment for pedestrians. Built form will be an appealing scale to pedestrians by providing generous street setbacks, variety of materials and colours and green elements to reduce building bulk and add visual interest. The tallest buildings will be located south of Balmoral Road to provide proximity for residents to the employment and mixed use areas and the station. Built form will transition to lower scale apartments or terrace housing north of Balmoral Road and at the edges of the precinct, particularly adjoining Elizabeth Macarthur Creek. Green spaces will bring a sense of nature into the neighbourhoods through open spaces, tree lined streets and garden areas within street setbacks. Local shops and cafes may be dispersed throughout the residential areas to provide convenient services closer to residences.

**Figure 10** Residential Development, New Acton  
*Source: Oculus*

**Figure 11** Residential Development, Sydney  
*Source: THSC*
3.2 Bella Vista Station Precinct Structure Plan and Key Elements

**Objectives**

a. To provide a mix of housing, retail, employment and services within the Precinct.

b. To ensure that development occurs in a coordinated manner consistent with the vision and development principles for the Precinct.

c. To locate higher scale mixed use and commercial uses close to the station to optimise access to the station facilities as well as outlook and amenity.

d. To develop a local centre in the area surrounding the station to provide local shopping, employment opportunities, and other services to support the incoming population.

**Controls**

1. Development is to comply with the desired character in Section 3.1 of this DCP, key elements in Table 1 and the Bella Vista Station Precinct Structure Plan at Figure 12. Where variations are proposed, development is to demonstrate how the vision, development principles, key elements for the Precinct and relevant specific objectives are to be achieved.

### Table 1 Key elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Use</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A mixed use local centre located east and north of the station with shops, cafes, restaurants and local services and some apartments at upper levels.</td>
</tr>
<tr>
<td></td>
<td>• Extension of Norwest Business Park surrounding the station and along Old Windsor Road predominantly characterised by commercial and office buildings.</td>
</tr>
<tr>
<td></td>
<td>• Predominantly apartments located north of the employment land up to Memorial Avenue and east of the local centre across Elizabeth Macarthur Creek. Opportunity for mixed use buildings to provide local shops and cafes in close proximity to residences.</td>
</tr>
<tr>
<td></td>
<td>• Medium density housing forms such as terraces further away from stations and framing key streets such as the local road along the Elizabeth Macarthur Creek corridor.</td>
</tr>
<tr>
<td><strong>Open Space &amp; Public Domain</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 42,000m² of open space across the precinct.</td>
</tr>
<tr>
<td></td>
<td>• 1 neighbourhood park north of Balmoral Road (15,000m²).</td>
</tr>
<tr>
<td></td>
<td>• 4 local parks distributed throughout the residential areas (total 27,000m²).</td>
</tr>
<tr>
<td></td>
<td>• Open space to be integrated with the Elizabeth Macarthur Creek corridor where possible.</td>
</tr>
<tr>
<td></td>
<td>• Additional pockets parks within the Elizabeth Macarthur Creek corridor and passive open space underneath the Skytrain.</td>
</tr>
<tr>
<td></td>
<td>• Public plazas and town squares in the areas surrounding the stations provide opportunities for passive recreation and informal community gathering and interaction.</td>
</tr>
<tr>
<td><strong>Movement network</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A new main north-south Collector Road provides the key movement spine for the precinct.</td>
</tr>
<tr>
<td></td>
<td>• A local road with high quality landscaping runs mostly alongside the Elizabeth Macarthur Creek corridor providing a high level of public accessibility to this open space.</td>
</tr>
<tr>
<td></td>
<td>• Local streets provide cross block links between the main north-south streets.</td>
</tr>
<tr>
<td></td>
<td>• An interconnected network of pedestrian and cycle paths provides, safe, direct and enjoyable opportunities for walking and cycling. The network will connect key destinations such as the station, parks and Elizabeth Macarthur Creek with residential and business areas. It will connect with established residential areas to the east of Elizabeth Macarthur Creek and with the broader cycling network.</td>
</tr>
<tr>
<td><strong>Built form</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• High quality architectural and urban design.</td>
</tr>
</tbody>
</table>
|                          | • Building heights up to 20 storeys around the station transitioning to lower heights away...
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>from the station.</td>
</tr>
<tr>
<td></td>
<td>• Building heights up to 8 storeys in the residential areas north of the employment land.</td>
</tr>
<tr>
<td></td>
<td>• A maximum of 6 storey buildings fronting Memorial Avenue and on land east of Elizabeth Macarthur Creek.</td>
</tr>
<tr>
<td></td>
<td>• Upper level towers above podiums well set back from streets.</td>
</tr>
<tr>
<td></td>
<td>• Parks and other key public domain areas protected from overshadowing.</td>
</tr>
</tbody>
</table>
Figure 12 Bella Vista Structure Plan
Figure 13  Bella Vista Public Plaza  
Source: Bella Vista Station Precinct Proposal, NSW Planning and Environment

Figure 14  Pedestrian Creek Crossing in Jacobs Ridge, Queensland  
Source: Bella Vista Station Precinct Proposal, NSW Planning and Environment
3.3 Desired Character – Kellyville Station Precinct

There are two key character areas within the precinct:

Mixed Use Areas
The local centre will provide a mix of retail, commercial, residential and community uses and will have a high density urban form with active frontages. Streets will be vibrant and walkable comprising ground level shopping, dining and public recreation spaces. The public domain will include high elements such as mature trees, seating, shading and lighting. Workers and visitors have ample access to services and amenities including informal spaces comprising street furniture and public art.

Mixed use buildings closest to the station will have the tallest heights, transitioning to lower heights and a more residential character further from the station and adjoining the town park. Buildings will be visually interesting and provide a human scale by incorporating upper level setbacks, quality architectural elements, variety of colours and materials and green walls.

Figure 15  Street through Employment Area Connecting with Elizabeth Macarthur Creek

Figure 16  Reserve Adjoining Green Square
Residential Areas
The residential areas will be highly permeable and attractive with compact urban form and good visual and physical connectivity to Elizabeth Macarthur Creek. Generous green spaces for recreation and community interaction will be dispersed throughout the residential areas. The tallest buildings will be located closest to the station and mixed use/employment areas, transitioning to lower scale apartments or terrace housing towards Memorial Avenue and along Elizabeth Macarthur Creek. Built form will be an appealing scale to pedestrians by providing generous street setbacks, variety of materials and colours and green elements to reduce building bulk and add visual interest. Shops and cafes may be dispersed throughout the residential areas to provide convenient services closer to residences.

Figure 17  Residential Development, Sydney
Source: THSC

Figure 18  Residential Development, Sydney
Source: Brent Boardman

3.4 Kellyville Station Precinct Structure Plan and Key Elements

Objectives
a. To provide a mix of housing, retail and commercial services within the Precinct.
b. To ensure that development occurs in a coordinated manner consistent with the vision and development principles for the Precinct.
c. To locate higher scale mixed use developments close to the station to optimise access to the station facilities as well as outlook and amenity.
d. To develop a local centre in the area surrounding the station to provide local shopping and other services to support the incoming population.

Controls
1. Development is to comply with the desired character in Section 3.3 of this DCP, key elements in Table 2 and the Kellyville Station Precinct Structure Plan at Figure 19. Where variations are proposed, development is to demonstrate how the vision, development principles, key elements for the Precinct and relevant specific objectives are to be achieved.
### Table 2  Key elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Use</strong></td>
<td>• A mixed use local centre surrounding the station providing shops, cafes, restaurants, local services and some residential apartments.</td>
</tr>
<tr>
<td></td>
<td>• Predominantly residential apartments located south of the station towards Memorial Avenue.</td>
</tr>
<tr>
<td></td>
<td>• Low and mid-rise apartment buildings located along the Elizabeth Macarthur Creek corridor and on the southern side of Sanctuary Drive near the T-way stop.</td>
</tr>
<tr>
<td></td>
<td>• Medium density housing forms such as terraces further away from stations and framing key streets such as the local road along the Elizabeth Macarthur Creek corridor.</td>
</tr>
<tr>
<td><strong>Open Space &amp; Public Domain</strong></td>
<td>• 20,000m² of open space across the precinct (excluding the Caddies Creek complex).</td>
</tr>
<tr>
<td></td>
<td>• 4 local parks distributed throughout the residential areas (total 14,000m²).</td>
</tr>
<tr>
<td></td>
<td>• Small courts for active recreation underneath the Skytrain (6,000m²) (note: approximately 7,000m² additional small courts to be provided underneath the Skytrain to the north of land to which this Development Control Plan applies)</td>
</tr>
<tr>
<td></td>
<td>• Open space to be integrated with the Elizabeth Macarthur Creek corridor where possible.</td>
</tr>
<tr>
<td></td>
<td>• Additional pockets parks within the Elizabeth Macarthur Creek corridor and passive open space underneath the Skytrain.</td>
</tr>
<tr>
<td></td>
<td>• Public plazas and town squares in the areas surrounding the station provides opportunities for passive recreation and informal community gathering and interaction.</td>
</tr>
<tr>
<td><strong>Movement network</strong></td>
<td>• A new main north-south Collector Road provides the key movement spine for the precinct.</td>
</tr>
<tr>
<td></td>
<td>• A local road with high quality landscaping runs mostly alongside the Elizabeth Macarthur Creek corridor providing a high level of public accessibility to this open space.</td>
</tr>
<tr>
<td></td>
<td>• Local streets provide cross block links between the main north-south streets.</td>
</tr>
<tr>
<td></td>
<td>• An interconnected network of pedestrian and cycle paths provides, safe, direct and enjoyable opportunities for walking and cycling. The network will connect key destinations such as the station, parks and Elizabeth Macarthur Creek with residential and business areas. It will connect with established residential areas to the east of Elizabeth Macarthur Creek and with the broader cycling network.</td>
</tr>
<tr>
<td><strong>Built form</strong></td>
<td>• High quality architectural and urban design.</td>
</tr>
<tr>
<td></td>
<td>• Height generally increases from the south towards the station.</td>
</tr>
<tr>
<td></td>
<td>• Building heights up to 15 storeys immediately surrounding the station.</td>
</tr>
<tr>
<td></td>
<td>• Heights transitioning to 13 storeys south of the station towards Memorial Avenue.</td>
</tr>
<tr>
<td></td>
<td>• Buildings along Elizabeth Macarthur Creek to be 4 – 6 storeys.</td>
</tr>
<tr>
<td></td>
<td>• To respond to adjoining existing development, building height in the north of the precinct at Sanctuary Drive to be no more than 4 storeys in height.</td>
</tr>
<tr>
<td></td>
<td>• Active, pedestrian friendly streets throughout the local centre.</td>
</tr>
<tr>
<td></td>
<td>• Upper level towers above podiums well setback from streets.</td>
</tr>
<tr>
<td></td>
<td>• Parks and other key public domain areas protected from overshadowing.</td>
</tr>
</tbody>
</table>
Figure 19  Kellyville Structure Plan
Figure 20  Kellyville Public Square  
Source: Kellyville Station Precinct Proposal, NSW Planning and Environment

Figure 21  Small Courts under Skytrain  
Source: Kellyville Station Precinct Proposal, NSW Planning and Environment
4 General Development Controls

4.1 Movement network and design

Objectives
a. To encourage residents to walk or cycle to shops, the railway station, recreation areas, community and other facilities by providing for safe and direct pedestrian and cycle connections between key locations.
b. A functional and attractive new street network is provided that facilitates access, safety and convenience for all street and road users and minimises the negative impact of traffic.
c. Carriageways and verge widths are consistent with the identified street hierarchy and profiles to allow streets to perform their designated functions within the street network, enhance functionality and amenity for users and accommodate public utilities and drainage systems.
d. Improve the capacity and function of the road network to support higher density development.

Controls
1. The street network is to be consistent with the indicative street network and hierarchy within Figures 22 and 23.
2. Streets profiles are to be consistent with the street profile figures below (note: some roads surrounding the stations will be constructed by North West Rapid Transit (NRT). These roads are not subject to the controls in this DCP and will be constructed as per NRT’s final designs – refer Appendix B.
3. An appropriate transition and connectivity is to be provided between roads constructed by NRT and the roads constructed by developers.
4. The design and construction of road infrastructure shall comply with Council’s Design Guidelines Subdivisions/Developments.
5. Where roundabouts are provided, these are to be appropriately landscaped to ensure visibility for traffic and high quality visual amenity (refer to Figure 29).
6. Road infrastructure not funded through a Contributions Plans is to be constructed to Council’s specifications and dedicated to Council at no cost.
7. The cycleway network is to be generally consistent with the existing and proposed cycleway network in Figures 24 and 25.
Figure 22  Indicative Street Network and Hierarchy – Bella Vista Precinct
Figure 23  Indicative Street Network and Hierarchy – Kellyville Precinct
Legend

- Red: Existing Cycleways
- Blue: Proposed Cycleways

Figure 24  Existing and Proposed Cycleway Network – Bella Vista Precinct
**Legend**

- **Existing Cycleways**
- **Proposed Cycleways**

**Figure 25**  Existing and Proposed Cycleway Network – Kellyville Precinct
Figure 26  Profile 1 – Local Street
Figure 27  Profile 2 – Local Street (mostly along Elizabeth Macarthur Creek Corridor)
Figure 28  Profile 3 – Enhanced Collector
4.2 Open space network

**Objectives**

a. To provide a range of quality public spaces to support new residential and employment uses, including parks, civic squares and places for community gatherings and events.

b. To provide an integrated open space network that links existing open spaces within and outside the Precinct.

c. To improve the amenity, facilities and usage of existing parks and public spaces.

d. To provide a range of open spaces with high quality landscaping that will accommodate the diverse recreational needs of existing and future residents and workers, as well as visitors to the area.

e. To contribute to the management of stormwater and enhancement of ecological values.

f. To maximise public access along Elizabeth Macarthur Creek.

g. To provide opportunities for collaboration between artists and designers in the development of creative, innovative, memorable, integrated and sustainable public art projects.

**Controls**

1. Land identified for open space, but not listed within an applicable development contributions plan, shall be dedicated to Council by the developer at no cost.

2. The open space network is to be consistent with the minimum areas and features identified in Tables 3 and 4.

3. A master plan must be prepared and approved by Council as part of the first development application for subdivision or development, allocating land for public open space generally in accordance with the quantum and locations identified in the precinct structure plans and Tables 3 and 4.
Table 3  Open Space Requirements – Bella Vista Precinct

<table>
<thead>
<tr>
<th>Park/Plaza</th>
<th>Minimum Area</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Neighbourhood Park                        | 15,000m²     | • Provide for a range of facilities to meet the community’s passive and active recreation needs.  
• Provide opportunities and fixtures to support small scale events and open air vending. |
| Local Parks                               | 27,000m²     | • 4 parks distributed throughout the residential areas.  
• Provide for a range of facilities including embellished passive recreation areas and spaces for community gardens and allotments. |
| Parks in the Elizabeth Macarthur Creek corridor | Subject to confirmation of creek corridor | • Provide for a range of facilities such as play elements, seating, drinking fountains and lighting integrated into the landscape design. |
| Open space under the Skytrain             | Subject to review after railway construction | • Predominantly passive recreation spaces including grassed areas, seating and lighting integrated into the landscape design. |

Table 4  Open Space Requirements – Kellyville Precinct

<table>
<thead>
<tr>
<th>Park/Plaza</th>
<th>Minimum Area</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Local Parks | 14,000m²     | • 4 parks distributed throughout the residential areas.  
• Provide facilities for casual activities such as BBQ, games and gatherings in the form of shelters and casual playgrounds. |
| **Bella Vista and Kellyville Station Precincts Development Control Plan** |
|---|---|
| **Parks in the Elizabeth Macarthur Creek corridor** | Subject to confirmation of creek corridor |
| **Open space under the Skytrain** | Subject to review after railway construction |
| **Courts under the Skytrain** | 6,000m² |
| **Caddies Creek Sports Complex** | 57,000m² extension to existing planned sports fields |

- Dog off-leash areas and large open grass areas.
- Allow building structures to provide for a small retail shop and/or toilets.
- Provide seating and other public street furniture and street lighting for safe use at night.
- Provide for a range of facilities such as play elements, seating, drinking fountains and lighting integrated into the landscape design.
- Predominantly passive recreation spaces including grassed areas, seating and lighting integrated into the landscape design.
- Provide sporting fields that function well under the Skytrain (e.g. basketball, tennis, skating, outdoor futsal).
- Provide plenty of vegetation in the buffer-zone between the courts and the T-way/Old Windsor Road and towards Memorial Avenue.
- Provide a pedestrian path from the station parking area.
- Incorporate low fences 800mm for separation between the road and higher fences between the fields as required to the type of sport field.
- Provide a variety of sporting fields.
- Incorporate flexible use of playgrounds in the design.
- Connect use and access with the proposed Caddies Creek Sporting Complex of Council.
- Potential aboriginal heritage interpretation installations.
- Provide sufficient bicycle parking close to the sport fields.
- Incorporate shared paths throughout the precinct connecting the sporting fields to the regional active transport network.
- Provide public drinking fountains.
- Include safety requirements in liaison with NSW Police.
- Direct relation with the Community Pavilion at the White Hart Inn.
- Allow for a second building to provide change rooms and toilets at the other side of the area if closer access is required.
- Provide seating at each entry of the sport fields.
- BBQ and picnic facilities.
4.3 Public domain

Objectives

a. To establish a framework for the design of the public domain within the B2 Local Centres.
b. To provide a range of quality public spaces to support new residential and employment uses.
c. To improve the quality and aesthetic of the public domain to reflect the transitioning of the Bella Vista and Kellyville Station Precincts Precinct into a Transit Orientated Community.
d. To provide an improved pedestrian experience.
e. To ensure the provision of high quality, functional and attractive informal spaces for community interaction and play are provided.
f. Undergrounding of power lines to improve the aesthetics and liveability of the centre and to facilitate increased space within road reserves to install public domain improvements.
Controls

1. A concept Public Domain Plan (PDP) is required to be provided with the first subdivision development application within the local centres (B2 Local Centre zone). The purpose of the PDP is to demonstrate at a high level how a high quality public domain will be developed as a result of future development on the proposed lots. The PDP should be a legible scale and show lot numbers, north point, scale, drawing title and site labels such as street names and include:
   - location of driveways and driveway crossovers;
   - verge design (footpath, landscape);
   - surrounding streets and lanes (kerb line, material surface where special treatments proposed);
   - street tree locations (sizes and species list can be provided on a separate plan);
   - demonstrated provision and arrangements for on-street car parking particularly in relation to street tree planting, driveways and intersections (in principle, not as public domain works);
   - extent of kerb line where parking is not permitted (in principle, not as public domain works);
   - location and type of any proposed street furniture;
   - location of retaining walls in the public domain; and
   - electricity substations, including screening elements.

2. Development applications for subdivision shall be accompanied by a Public Domain Plan to demonstrate how high quality elements (driveways, footpaths, street trees, street furniture, public art etc.) will be incorporated into future development. The Public Domain Plan must refer to and be compatible with the Sydney Metro Northwest Urban Design and Landscape Corridor Plan.

3. Attractive, high quality outdoor spaces for children to play should be integrated into the public domain within centres where appropriate. Such spaces should allow for interactive play and include seating and shading.

4. The Bella Vista Retail Plaza is to incorporate a pedestrian mall with high quality and durable elements including paving, landscaping and street furniture.

5. The Kellyville Town Square is to incorporate open paved areas, dedicated areas for café and restaurant seating, and high quality and durable paving and street furniture, shade tree planting and landscape features.

6. The White Hart Inn (Kellyville Precinct) is to provide open paved areas, seating and street furniture, shade tree planting and interpretive installation of the White Hart Inn foundations.

7. Council requires underground electricity reticulation and telecommunications for all urban development. Council will require as a condition of any development consent that any existing aboveground electricity reticulation service be relocated underground with the exception of main transmission lines.
**Figure 34**  Example Town Square, Rouse Hill
Source: www.hdrinc.com/portfolio/rouse-hill-town-centre

**Figure 35**  Public Space for Workers & Visitors
Source: Peter Walker

**Figure 36**  Public Space for Workers & Visitors, Rhodes
4.4 Solar Access and Overshadowing

Objectives
a. To provide a comfortable and enjoyable public realm.
b. To ensure new buildings and works allow good sunlight access to public spaces.
c. To ensure that overshadowing from new buildings or works does not result in significant loss of sunlight and diminish the enjoyment of public spaces for pedestrians.
d. To protect, and where possible increase the level of sunlight to public spaces during the times of the year when the public space is most commonly used.

Controls
1. Development is to ensure that the private open space of adjoining properties including the common open spaces of private developments is to receive a minimum of 4 hours of sunlight between the hours of 9am to 3pm on June 21.
2. No additional overshadowing of public open spaces such as local parks and plazas, including public open spaces adjoining the precinct is to occur between the hours of 11am and 2pm between the dates of April 21 and August 21.

4.5 Wind

Objectives
a. To allow for cooling summer breezes to move through the precinct.
b. To ensure the built form does not provide adverse wind conditions which will impact upon the amenity of pedestrian comfort in streets and public open spaces.
c. The built form does not adversely impact upon the amenity of residents in common open spaces.

Controls
1. Built form is to demonstrate that the passage of cooling summer breezes will not be impacted.
2. Buildings 8 or more storeys in height (or over 25 metres) require wind tunnel testing, irrespective of whether they are built to the street frontage or not, which demonstrates the following:
   a. In open areas to which people have access, the annual maximum gust speed should not exceed 23 metres per second;
   b. In walkways, pedestrian transit areas, streets where pedestrians do not generally stop, sit, stand, window shop and the like, annual maximum gust speed should not exceed 16 metres per second;
   c. In areas where pedestrians are involved in stationary short-exposure activities such as window shopping, standing or sitting (including areas such as bus stops, public open space and private open space), the annual maximum gust speed should not exceed 13 metres per second;
   d. In areas for stationary long-exposure activity, such as outdoor dining, the annual maximum gust speed should not exceed 10 metres per second.
   e. The report is to be prepared by a suitably qualified engineer.
4.6 Public Art

*Objectives*

a. To ensure new development seeks opportunities for the provision of artwork to enrich the public domain and promote enjoyment by the community.

b. To provide for the integration of public art in the design of the public domain.

c. To locate and design public artwork to reinforce the desired character of each neighbourhood or location.

d. To ensure public art is:
   - High quality, durable and low maintenance,
   - Does not impact on pedestrian safety nor cause an obstacle to those with impaired sight.
   - Provides positively to the experience of place; and,
   - Is community endorsed

*Controls*

1. A public art strategy is required to form part of the public domain strategy required for the first subdivision development application within the local centres (the areas zoned B2 Local Centre). The public art strategy is to achieve the following principles:
   - provide public art at key focal points throughout the precinct in locations that maximise visibility;
   - enhance the precinct’s identity, sense of place and desired character; and
   - ensure public art is high quality, durable and low maintenance.

2. The public art strategy is to address:
   - context within the Bella Vista Station and Kellyville Station Precincts;
   - community/public artist engagement;
   - location of installation/art work;
   - themes, narratives, including the history and heritage of the place;
   - procurement strategies;
   - maintenance strategies;
   - risk assessment and hazard control summary, and
   - decommissioning strategies.

3. Development Applications are to demonstrate consistency with the public art strategy.

![Figure 37 Ben Chifley forecourt of Chifley Tower](Source: THSC)

![Figure 38 Public Art, Boston](Source: www.bu.edu/today/2013/discovering-bostons-public-art)
4.7 Integrated Water Management

Objectives

a. The quality and integrity of urban waterways is maintained and enhanced through both the construction and occupation phases of development.
b. Urban form minimises risks to life and property as a result of either minor or major flooding.
c. Developments adopt a best practice Water Sensitive Urban Design approach at the individual lot, overall development and regional scales.
d. Developments meet the required water quality objectives prior to discharging to receiving waterways and minimise impacts such as streamflow erosion potential on receiving waterways.
e. Stormwater runoff is treated as a valuable resource and its use for non-potable purposes is maximised.
f. Nuisance flooding is minimised to a level acceptable.

Controls

Flood Risk Management

1. All owners of properties adjoining land zoned SP2 Infrastructure (Stormwater Management System) are required to contact Sydney Water to confirm the 100 year ARI flood extent and associated flood levels from Elizabeth Macarthur Creek prior to the lodgement of development and subdivision applications. Filling of land adjacent to land zoned SP2 Infrastructure (Stormwater Management System) may be permitted in accordance with Sydney Water’s Trunk Drainage Works Plan.
2. Development on land adjoining land zoned SP2 Infrastructure (Stormwater Management System) is to apply the provisions of Council’s Flood Controlled Land DCP. In applying these provisions consideration is to be given to the type of development, the application of controls according to the Flood Planning Level associated with the property, car parking, flood compatible building materials and land filling.

Stormwater Management

1. A Stormwater Management Plan is to be prepared for each development application for subdivision or development to include consideration of various sustainable practices including stormwater harvesting and re-use and water conservation.
2. All Stormwater drainage designs are to comply with the most up to date revision of Council’s Design Guidelines Subdivision/Developments (September 2011) and Contributions Plan No. 18 – Bella Vista and Kellyville Station Precincts.
3. Any discharge to, or construction within land zoned SP2 Infrastructure (Stormwater Management System) will require the approval of Sydney Water and the NSW Office of Water.

4. Individual connections into land zoned SP2 Infrastructure (Stormwater Management System) is not permitted. Subdivision plans are to minimise the number of connections.

5. During the construction phase of development, the relevant Stormwater Management Objectives for new development as set out in the most up to date revision of "Managing Urban Stormwater: Soils and Construction" (NSW Department of Housing) must be complied with in full.

6. Erosion and sediment control measures are to be implemented and regularly maintained on site, while sediment trapping measures are to be located at all points where stormwater runoff can enter inlets to stormwater systems, or where runoff may leave the construction site.

**Water Sensitive Urban Design**

1. Water Sensitive Urban Design (WSUD) principles and techniques are to be adopted for all development to provide sustainable and integrated management of land and water resources, incorporating best practice stormwater management, water conservation and environmental protection measures.

2. Stormwater runoff must be treated on the development site before it discharges to a public drainage system or into land zoned SP2 Infrastructure (Stormwater Management System).

3. A WSUD management plan is to be prepared for all development. This plan can be incorporated into a Stormwater Management Plan.

4. The WSUD Management Plan is to take into account water quality and stream erosivity objectives, together with attenuating flow rates and runoff volumes to acceptable levels following urban development. Water management performance objectives are set out in Table 5.

**Table 5  Water Quality and Stream Erosivity Performance Objectives**

<table>
<thead>
<tr>
<th></th>
<th>Water Quality % Reduction in Pollution Loads</th>
<th>Environmental Flows Stream Erosion Control Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross Pollutants (&gt;5mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Suspended Solids</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Phosphorus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Nitrogen</td>
<td></td>
</tr>
<tr>
<td>Stormwater Management Objective</td>
<td>90</td>
<td>Post Development Duration of above ‘Stream Forming Flow’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Natural Duration of Above ‘Stream Forming Flow’</td>
</tr>
<tr>
<td>Ideal Stormwater Outcome</td>
<td>100</td>
<td>3.5 – 5.0:1</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>

1. For the purposes of these objectives, the ‘stream forming flow’ is defined as 50% of the 50% AEP flow rate estimated for the catchment under natural conditions.

2. This ratio should be minimised to limit stream erosion to the minimum practicable. Development proposals should be designed to achieve a value as close to one as practicable, and values within the nominated range should not be exceeded. A specific target cannot be defined at this time.
5. Industrial/commercial developments within the Precincts are required to manage the pollutant loads from each separate allotment to ensure compliance with the performance objective listed in Table 5 prior to discharge to any adjoining drainage system.

6. Water quality modelling undertaken to support development proposals within the Precincts shall utilise MUSIC Version 5 (or later) and be in line with the Draft NSW MUSIC Modelling Guidelines, Sydney Metropolitan Catchment Management Authority, 2010, utilising the modelling parameters in Tables 6 and 7.

**Table 6  Soil / groundwater parameters recommended for adoption in MUSIC modelling**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Urban</th>
<th>Non-urban</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impervious area parameters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainfall threshold</td>
<td>mm/day</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Pervious area parameters</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil storage capacity</td>
<td>mm</td>
<td>170</td>
<td>210</td>
</tr>
<tr>
<td>Initial storage</td>
<td>% of capacity</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Field capacity</td>
<td>mm</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Infiltration capacity coefficient – a</td>
<td></td>
<td>210</td>
<td>175</td>
</tr>
<tr>
<td>Infiltration capacity coefficient – b</td>
<td></td>
<td>4.7</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Groundwater properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial depth</td>
<td>mm</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Daily recharge rate</td>
<td>%</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>Daily baseflow rate</td>
<td>%</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Daily deep seepage rate</td>
<td>%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 7  Recommended Stormwater Quality Parameters for MUSIC modelling**

<table>
<thead>
<tr>
<th>Land use</th>
<th>Storm Flow</th>
<th>Base Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TSS Mean</td>
<td>TP SD</td>
</tr>
<tr>
<td>(all values expressed as log_{10} mg/l)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General urban</td>
<td>2.15</td>
<td>0.32</td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>2.43</td>
<td>0.32</td>
</tr>
<tr>
<td>Commercial</td>
<td>1.30</td>
<td>0.32</td>
</tr>
<tr>
<td>Roads</td>
<td>1.60</td>
<td>0.32</td>
</tr>
<tr>
<td>Roofs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest/Natural</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: SD = standard deviation, TSS = total suspended solids, TP = total phosphorus and TN = total nitrogen

7. For developments generating oils and grease, the additional objective of no visible oils for flows up to 50% of the one-year ARI peak flow shall be achieved.

8. WSUD infrastructure elements are to be designed and constructed in accordance following publications:
9. As part of a WSUD management plan, residential, employment and commercial developments are to install rainwater tanks to meet a portion of water supply demand such as outdoor use laundries and toilets. With the exception of detached residential dwellings, a water balance assessment is to be undertaken for the development and rainwater tanks appropriately sized to cater for the water use demand. The following provisions apply for each development type:

**Detached residential dwellings**

a) All residential dwellings are required to provide a (minimum) 3,000 litre rainwater tank and such tank is to be connected for use in toilet flushing and external uses. Larger tanks than the minimum requirement are permitted.

b) The rainwater tank may be connected to laundries as well as being available for outdoor use including filling of swimming pools.

**Multi Dwelling Housing**

c) The minimum storage capacity of this system must be 3,000 litres per proposed dwelling or as defined by a detailed water balance assessment of the development.

d) Rainwater tanks may be connected to laundries as well as being available for outdoor use including filling of swimming pools.

**Residential Flat, Mixed Use and Commercial Buildings**

a) The capacity of rainwater tanks to be provided on the development is to be determined through a detailed water balance assessment.

b) The tanks are to be used for external uses and may only be used for other purposes such as any wash down bays and laundry facilities.

10. Each rainwater tank is to be provided with potable water trickle top-up with a back flow prevention device, complying with Sydney Water requirements.

11. In accordance with the recommendations made in the publication "Guidance on the Use of Rainwater Tanks" (enHealth, Commonwealth Government 2004), diversion of the "first flush" of up to 180 litres is to be incorporated into the design of the rainwater tank and associated plumbing based on a minimum first flush of 1L/m² of roof area.
4.8 Subdivision and earthworks

Objectives

a. Topsoil and vegetation removal and “land-shaping” on land where residential subdivisions are being constructed is minimised.

b. Subdivisions provide a landform that is capable of supporting a range of residential, business and industrial uses.

c. Development visually integrates with the surrounding environment.

Controls

1. Earthworks shall be minimised to locations where the construction of roads require earthworks to be undertaken or filling adjacent to land zone SP2 Infrastructure (Stormwater Management System), subsequent to Sydney Water’s advice (refer to the Integrated Water Management and Cut and Fill Sections of this DCP).

2. Such earthworks may extend into the proposed allotments for the purpose of providing suitable vehicle access to identified building platforms.

3. Vegetation and topsoil are not to be removed or disturbed in areas outside of the above areas of proposed construction.

4. All proposed public open space areas are to be fenced and are not to be disturbed or used for any purpose during the construction of a subdivision.
5. Subdivision applications must provide a plan showing the existing pre-development and proposed finished ground levels to enable an assessment of the extent of earthworks proposed and assessment of the relationship between the finished road levels and proposed building platform levels.

6. The Elizabeth Macarthur Creek corridor is to remain, or become vegetated, with native vegetation (trees, shrubs and groundcover species) according to the appropriate local provenance vegetation community.

7. Perimeter roads along the edge of the Elizabeth Macarthur Creek corridor shall be in accordance with Precincts Structure Plan Maps and relevant road profile.

4.9 Cut and Fill

Objectives

d. Developments minimise the impact of earthworks on the stormwater regime, salinity and groundwater.

e. The extent of cut and fill required for large scale development does not detract from the appearance and design.

f. Development visually integrates with the surrounding environment.

g. Fill material imported to a site is to be clean and comply with the contamination and salinity provisions of this section.

h. Land is appropriately stabilised and retained.

i. Cut and fill does not encroach within, or adversely affect the efficiency, integrity and stability of any open space area.

Controls

1. The filling of land adjacent to land zoned SP2 Infrastructure (Stormwater Management System) may be required to facilitate the urban development of the Precincts and will only be permitted after consultation with Sydney Water and the Office of Water and to the subsequent levels provided. Justification for any proposed changes to land levels provided is required and is to be supported by a flood assessment that takes into account the cumulative impact of flooding behaviour, and associated risks caused by individual developments.

2. In the areas of fill relevant provisions of Council’s Flood Controlled Land DCP are to be applied, with reference to the Integrated Water Management Section of this DCP.

3. A Fill Plan must be prepared.

4. All cut and fill works shall be in accordance with Council’s Design Guidelines Subdivisions/Developments and Works Specification Subdivisions/Developments.

5. All landfilled areas must comprise clean material free from contamination. Imported material shall be certified “Virgin Excavated Natural Material (VENM)”.

6. Landfilled areas must be suitably compacted and stabilised with density tests to verify that compaction was achieved in accordance with Council requirements.

7. Land filled areas must be revegetated where appropriate.

8. Embankment batters shall have a maximum slope of 1:6.

9. Embankment batters and retaining walls are to be landscaped to reduce erosion and provide a suitable screen. They should be vegetated preferably with native ground covers and small native trees with mature height of up to 10 m.
10. Development shall comply with the provisions of State Environmental Planning Policy No. 55 – Remediation of Land.


4.10 Ecologically sustainable development

Objectives

a. Building designs are innovative and sustainable to reduce the reliance on, and consumption of, fossil fuels and potable water supplies.
b. Development adapts to climate change.
c. Developments contribute to improved quality of life, health and well-being of the community.
d. The design, construction and operation of development minimises adverse impacts on the natural environment.
e. Use landscape treatments to improve amenity for people using open space.

Controls

1. Residential flat buildings, townhouses and terraces built as a development lot should achieve a minimum 5 star NatHERS energy rating for each dwelling unit.
2. Development other than residential should achieve a minimum 5 star Green Star Design and as Built rating, respectively,
3. Building operation should achieve a minimum 4.5 star base building and tenancy NABERS Energy rating, where applicable.
4. The incorporation of green walls and roofs into the design of commercial and residential buildings is encouraged. Where suitable, building facades should incorporate vertical landscaping features to soften the visual bulk of buildings and to improve streetscape appeal.
5. Canopy trees are to be planted within street verges and medians to provide shade and reduce pavement surface temperatures. Understorey planting and permeable surfaces should also be provided where possible to reduce the extent of paved area and to enhance the amenity of the streetscape environment.
6. Buildings are encouraged to incorporate a trigeneration energy facility that provides energy-efficient power, heating and air conditioning for use on site.
7. Building designs are to:
   - Maximise the use of natural light and cross ventilation
   - Reduce the reliance on mechanical heating and cooling through the use of eaves, awnings, good insulation and landscaping
   - Include energy efficient light fittings and water fittings
   - Allow for separate metering of water and energy usage for commercial and multi-unit tenancies.
Green roofs can help to decrease heat absorption, reduce the ambient temperatures of buildings, and improve air quality and building efficiency. They can also provide a habitat for urban ecology and have amenity and recreational benefits for a building’s occupants.

Green walls are plant systems that are grown on the vertical façade of a building and are often a striking and attractive design feature. Benefits include reducing the radiation of absorbed heat from buildings, they provide insulation from noise and heat, and make public spaces more appealing for the community to use and enjoy.

Figure 42  Green Roof to individual flats
Source: Bill Dunster

Figure 43  Green Wall at 1 Bligh Street, Sydney
Source: City of Sydney

Figure 44  Green Wall at ‘The Met’
Source: WOHA Design
4.11 Ecology and riparian corridors

Objectives
a. To protect and enhance areas of significant native vegetation
b. To protect and enhance wildlife habitat
c. To protect and enhance the integrity and environmental functionality of riparian corridors

Controls
1. Where possible, development is to be sited to retain areas of significant native vegetation, in particular larger and better quality areas of Cumberland Plain Woodland.
2. Provide green roofs and walls wherever practical to mitigate the loss of green canopy and vegetation as a result of development.
3. A site specific Vegetation Management Plan (VMP) is to be prepared and implemented for each precinct as follows:
   - **Kellyville Station Precinct:**
     - A VMP is to be lodged with the first development applications for road construction on land in the vicinity of the Caddies Creek and Elizabeth Macarthur Creek corridors, and approved prior to the commencement of the road construction works in this land.
   - **Bella Vista Station Precinct:**
     - A VMP is to be lodged with the first development applications for road construction on land in the vicinity of the Elizabeth Macarthur Creek corridor and approved prior to the commencement of the road construction works in this land.
4. The VMP is to be prepared in accordance with relevant guidelines and based on standard vegetation management actions including:
   - Collection of seed from any native vegetation proposed to be cleared at the site;
   - Weed control;
   - Management of fire for conservation;
   - Management of human disturbance;
   - Retention of regrowth and remnant native vegetation;
   - Replanting or supplementary planting where natural regeneration will not be sufficient;
   - Retention of dead timber;
   - Erosion control; and
   - Retention of rocks.
5. The VMP is to ensure the rehabilitation and regeneration of the Caddies Creek, Elizabeth Macarthur Creek and Strangers Creek vegetated riparian corridors (being 30m wide on either side of the creek measured from top of bank).
6. The VMP is to provide for a minimum 2 year monitoring and maintenance period for the rehabilitated riparian area and other revegetation following final planting.
4.12 Safety & security

Objectives
a. To provide high levels of property safety and personal comfort and safety.
b. To minimise opportunities for criminal and anti-social behaviour.

Controls
1. Development is to address the principles of Crime Prevention Through Environmental Design.

Note: Consideration shall also be given to The Hills Council’s Policy Designing Safer Communities, Safer by Design Guidelines (June 2002).
4.13 Heritage (Aboriginal and European)

Objectives
a. Development is designed and located to protect Aboriginal sites and archaeological relics by minimising the likelihood of disturbance.
b. Development is designed and located to minimise any adverse impacts on European Heritage.

Controls – Aboriginal Heritage

1. An Aboriginal Due Diligence Report is required for each major development site/subdivision and must be prepared in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW.

2. Where a Due Diligence Report identifies the presence or likely presence of any Aboriginal sites or relics on or near the subject development site, further Aboriginal Cultural / Archaeological Assessment by a suitably qualified person must be undertaken. Where a site is identified as significant, a letter from the relevant Aboriginal Lands Council is required to be submitted expressing support or recommendations for the subdivision proposal.

3. The report prepared by Comber Consultants titled ‘Aboriginal Cultural Heritage Assessment: North West Rail Link Project Bella Vista Station Priority Precinct Rezoning Proposal’ dated August 2015 is to guide any future site-specific Aboriginal heritage assessments and management of Aboriginal heritage sites, values, objects and/or places within the boundaries of the Bella Vista Station Precinct.

4. The report prepared by Comber Consultants titled ‘Aboriginal Cultural Heritage Assessment: North West Rail Link Project Kellyville Station Priority Precinct Rezoning Proposal’ dated August 2015 is to guide any future site-specific Aboriginal heritage assessments and management of Aboriginal heritage sites, values, objects and/or places within the boundaries of the Kellyville Station Precinct.

Controls – European Heritage

7. Development in the vicinity of any European heritage must have regard to Part C Section 4 – Heritage of this DCP.

8. The report prepared by TKD Architects titled ‘North West Rail Link Project Bella Vista Station Precinct: European Heritage Assessment’ dated August 2015 is to serve as a guiding document for any future site-specific archaeological assessments and management of archaeological impacts within the boundaries of the Bella Vista Station Precinct.

9. The report prepared by TKD Architects titled ‘North West Rail Link Project Kellyville Station Precinct: European Heritage Assessment’ dated August 2015 is to serve as a guiding document for any future site-specific archaeological assessments and management of archaeological impacts within the boundaries of the Kellyville Station Precinct.
5 Local Centre & Business Development

5.1 Desired layout and character

Objectives

a. A range of employment and services are located close to transport connections and high quality open space.

b. Centres located around the stations are attractive, convenient and walkable, providing shops, cafes, restaurants, community facilities and jobs.

Controls

1. Development within centres and business zones shall be generally consistent with the following indicative layout plans.

Figure 49 Indicative Layout Plan – Bella Vista Precinct
Figure 50  Indicative Layout Plan – Kellyville Precinct
5.2 Setbacks, building layout and design

Objectives
a. To ensure development creates a positive streetscape and achieves a high quality architectural design that promotes commercial, retail and business activity.
b. To establish streets with a high quality pedestrian friendly retail strip.

Controls
1. All buildings (including mixed use developments within the commercial area) are to comply with the podium/street frontage heights and upper level setbacks identified in Figures 67, 68, 69 and 70.
2. Buildings on street corners are to address both street frontages.
3. Retail and commercial uses at ground level are to be designed so that the ground floor for at least part of the premises is at the same level as the finished footpath level of the adjacent street and/or open space.
4. The location and means of access to customer car parking within a building is to be clearly visible.
5. The façade design of a development is to utilise large expressed elements to relate to passing motorists and articulate the key components of the building such as entries, showrooms and the like. Finer detail to identify individual tenancies and different building levels are to be used to add richness to the architectural design.
6. Awnings are to be provided over commercial and residential entries. Continuous awnings are to be provided above retail uses and the full length of Active Frontages.
7. Development provides awnings which are a minimum width of 1.5m over the pedestrian access/footpath.
8. Footpath awnings are designed to complement and integrate with the façade and the streetscape.
9. Signage is to be integrated into the overall façade design and be in accordance with the relevant signage strategy.
10. Sun shading is to be provided appropriate to orientation for glazed portions of façades.
11. Roof design is to be incorporated into the overall building design and built form modelling.
12. Car parking or external retail space shall not be located on the roof of buildings.
13. Loading areas for retail and commercial development are to be screened from public roads and public access areas.
14. Loading areas and vehicular access points for developments in the B2 Local Centre zone must avoid conflicts with high pedestrian activity areas including waiting zones for bus, taxi and kiss and ride activities.
Figure 51  Podium addresses public domain, Jackson’s landing,
Source: e-architect.co.uk

Figure 52  Indicative Podium Setback
Source: unknown

Figure 53  Podium integrated with public domain
New Acton, Source: THSC

Figure 54  Podium addresses public domain
Jackson’s landing, Source: e-architect.co.uk
**Figure 55**  Artist impression of quality building design  
Source: www.collinsandturner.com/architecture/barangaroo-r7

**Figure 56**  Quality Building Design, Macquarie Bank Building, Sydney  
Source: ForlItt
5.3 Active Street Frontages

The Hills LEP 2012 specifies locations for active street frontages.

Objectives

a. To encourage active street frontages in suitable locations.
b. Active street frontages cater for a diverse range of activities.
c. Active street frontages provide energetic, safe and vibrant pedestrian environments.
d. Public domain spaces encourage activity outside of commercial business hours.

Controls

1. Active frontages are to be provided in accordance with the active street frontages identified on the Indicative Layout Plan for each Precinct in Section 5.1 of this DCP.

2. In addition to any active street frontages identified in The Hills LEP 2012 and the Indicative Layout Plans in Section 5.1 of this DCP, any portion of the ground floor of a building adjoining or directly opposite an urban plaza/town square (or similar) for use by the public that has an area of 500m$^2$ or greater, is to include an active street frontage on that portion of the ground floor.

3. Active frontages may include one or a combination of the following:
   – Shop front;
   – Café or restaurant if accompanied by an entry from the street;
   – Community and civic uses with a street entrance;
   – Recreation facilities with a street entrance;

4. An active street frontage is not required for any part of a building that is used for any of the following:
   – entrances and lobbies (including as part of mixed use development);
   – access for fire services; and
   – vehicular access.

5. Ground floor uses are to be at the same level as the footpath and be directly accessible from the street.

6. Where an active frontage is required, a minimum of 80% of the building frontage is to be transparent (i.e. windows and glazed doors). Clear glazing is to be provided to windows and doors.

7. For larger developments, building entrances should be provided on each street frontage.

8. Service entries / loading docks and vehicular access points are not permitted on active frontages.

9. Security grilles may only be fitted internally behind the shopfront. They are to be transparent and fully retractable.
Figure 57  Active street frontage, cafe
Source: THSC

Figure 58  Active street frontage, retail uses
Source: THSC
6 Residential

6.1 Residential flat buildings and shop top housing

This section applies to residential flat buildings and shop top housing developments within the areas of the Precinct zoned R1 General Residential, R4 High Density Residential and B2 Local Centre.

State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65) applies to residential flat buildings and the residential component of a shop top housing development in the Precinct. Such development is to have regard to SEPP 65 and the NSW Apartment Design Guide in addition to the relevant provisions below.

6.1.1 Site requirements

The Hills LEP 2012, clause 4.1A (Minimum lot sizes for dual occupancy, multi dwelling housing and residential flat buildings) specifies the minimum lot size for residential flat buildings in the R1 General Residential, R3 Medium Density Residential, R4 High Density Residential and B2 Local Centre zones.

Objectives

a. To encourage the amalgamation of sites and discourage the creation of isolated development sites.

b. To provide flexible site requirements for the Bella Vista Station and Kellyville Station Precincts.

c. Sites have sufficient space for landscaping that will complement the building form and enhance the landscape character of the street.

d. Developments provide space for recreation and for use by residents of developments.

e. Development sites have sufficient area to provide adequate access, parking, landscaping and building separation.

Controls

1. Development sites shall have a minimum road frontage of 30m.

2. Development sites shall have a minimum site depth of 40m.

3. Residential flat buildings and shop top housing are to have a frontage (address) to the street and are not to be located on battle-axe allotments or rely on a right of access arrangement for access to a public road.

6.1.2 Built form controls

Objectives

a. To ensure the street frontage heights and setbacks reinforce the future precinct character and residential identity.

b. To ensure building heights and articulation provide a sensitive transition to the surrounding areas and that high density residential development provides a slender built form.

c. To ensure the bulk, massing and articulation of buildings provides a high quality pedestrian street experience, reduces the appearance of building bulk and scale and provides for visual interest and innovative design.

d. To create an active interface between ground floor uses and the street.

Draft September 2017
e. To ensure buildings are able to adapt to differing uses.

f. To reinforce key landmark sites and defining entries / gateways through the location of taller buildings.

g. To ensure buildings allow reasonable daylight access and privacy to all developments and the public domain, including streets.

**Controls**

1. The proposed development must not exceed the maximum height in storeys shown on the Structure Plan in Figures 12 and 19. The maximum height in storeys may only be achieved when it is demonstrated that:

   a. The built form achieves the desired character;
   
   b. The development is sympathetic to the heritage context, contributes positively to the precinct setting; and
   
   c. The development does not provide additional overshadowing to public open space between the hours of 11am-2pm between the dates of 21 April to 21 August. This includes public open spaces outside and adjacent to the precinct.

   d. Development shall be designed to incorporate clearly defined ground floor street zone, podium and upper level elements. The podium element of any development is to be articulated as shown in figure 59.

2. On streets with a road reserve of less than 20m the width of the façade shall not exceed 40m. On streets with a road reservation of 20m or greater the street frontage shall not exceed 65m.

3. Buildings are to have a maximum length of 65m. Where a building has a length greater than 30m it is to be separated into at least two parts by a significant recess or projection. Where a building has a length greater than 40m it shall have the appearance of two distinct building elements with individual architectural expression and features.

4. Buildings are to have a maximum depth of 18m measured from glass line to glass line.

---

**Figure 59**  Street façade articulation
Source: THSC
5. Adjacent buildings are to comply with the provisions of SEPP65 ADG building separation. For developments of 3 storeys or less, the minimum building separation is 4m.

6. Pedestrian links should be connected to the existing and proposed pedestrian network.

7. The entry to the development is to be visually identifiable from the street frontage with clear sight lines. Separate entrances are required for commercial / retail and residential uses.

8. All ground floor lobbies are to have a direct visual connection to the street.

9. Balconies to upper levels are to provide a minimum 50% opaque / solid balustrading to provide for residential amenity.

10. Street corners must be addressed by giving visual prominence to parts of the building façade, such as a change in building articulation, material or colour, roof expression or height. Buildings on street corners are to address both street frontages.

11. Each street façade is to be articulated into smaller elements at a scale or grain that reflects the use of the building and its various components, the location of the building relative to pedestrian or outdoor recreation activity, and elements such as building entries.

12. The floor plate of each individual level of a building shall not exceed a cumulative total of:
   - 50% of the site area (excluding land to be dedicated or acquired for a public purpose) for each level of the building up to, and including, the 8th storey;
   - 40% of the site area (excluding land to be dedicated or acquired for a public purpose) for each level of the building between 9 to 12 storeys; and
   - 30% of the site area (excluding land to be dedicated or acquired for a public purpose) or 750m² per building (whichever is the lesser), for each level of the building above 12 storeys.
13. Services such as for fire protection, water and power distribution are not to intrude upon the pedestrian right of way, visually detract from the appearance of the development, and are to be screened from the street frontage with materials which are integrated with architectural expression of the development.

14. Car parking areas at lower levels must be sleeved by other uses with a minimum depth of 10m to activate the street. Car parking at the ground floor level is not encouraged in a mixed use building.

15. Underground car parking is not to intrude into the setback zone of 5m from the street boundary or be aligned with the building line.
6.1.3 Building setbacks

The Hills LEP 2012 specifies locations for specific building setbacks.

Objectives

a. To provide strong definition to the public domain and create a consistent streetscape.

b. To set taller building elements back from the street to reduce building scale and bulk and enable adequate sunlight access to the public domain.

c. To provide articulation zones to complement building mass and emphasise key design elements such as entrance points and respond to environmental conditions including solar access, noise, privacy and views.

d. To ensure adequate separation between buildings on different sites to alleviate amenity impacts, including privacy, daylight access, acoustic control and natural ventilation.

e. To create a landscaped streetscape that can accommodate large trees.

Controls

1. Setbacks shall be provided in accordance with the setbacks included within Figures 67, 68, 69 and 70. If not identified on these figures, setbacks shall be provided in accordance with Table 8.

2. Dwellings on the ground floor facing the street are to have individual entries from the street wherever possible.
Table 8 Setbacks for Residential Flat Buildings and Shop Top Housing

<table>
<thead>
<tr>
<th>Setbacks – Shop Top Housing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front setbacks</strong></td>
<td></td>
</tr>
<tr>
<td>• Ground level and podium setbacks: Nil</td>
<td></td>
</tr>
<tr>
<td>• Levels above 4 storeys: 6m behind the front building line.</td>
<td></td>
</tr>
<tr>
<td><strong>Side and rear setbacks</strong></td>
<td></td>
</tr>
<tr>
<td>• Where adjoining or adjacent to commercial development: Nil</td>
<td></td>
</tr>
<tr>
<td>• Where adjoining or adjacent to residential development: 6m or to comply with SEPP 65 whichever is the greater (to be used exclusively for landscaping).</td>
<td></td>
</tr>
<tr>
<td><strong>Setback to classified roads and Skytrain</strong></td>
<td></td>
</tr>
<tr>
<td>• 10m (note: noise attenuation requirements may require a greater setback distance)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setbacks – Residential Flat Buildings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front Setback</strong></td>
<td>7.5m</td>
</tr>
<tr>
<td><strong>Primary Frontage Setback</strong></td>
<td></td>
</tr>
<tr>
<td>• For all buildings, on a street reservation greater than 20m in width, all storeys above the 6th storey shall be setback 3m behind the front building line.</td>
<td></td>
</tr>
<tr>
<td>• For all buildings on a street reservation less than 20m in width, all storeys above the 4th storey shall be setback 6m behind the front building line.</td>
<td></td>
</tr>
<tr>
<td>• Underground car parking is not to intrude into the primary frontage setback.</td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Frontage Setback</strong></td>
<td></td>
</tr>
<tr>
<td>• For all buildings on a street reservation greater than 20m in width, all storeys above the 8th storey shall be setback 9m behind the front building line.</td>
<td></td>
</tr>
<tr>
<td><strong>Rear Setback</strong></td>
<td>8m or to comply with SEPP 65 whichever is the greater</td>
</tr>
<tr>
<td><strong>Side Setback</strong></td>
<td>6m or to comply with SEPP 65 whichever is the greater</td>
</tr>
<tr>
<td><strong>Balconies</strong></td>
<td>Balconies shall not protrude into the setback area.</td>
</tr>
</tbody>
</table>

Figure 65 High quality landscape treatments provide a softened public domain
Source: Google Maps

Figure 66 High quality address to public domain
Source: Google Maps

Draft September 2017
Figure 67  Setbacks for the Bella Vista Station Precinct
Podium Setbacks

- 6m behind front building line above 4 storeys
- 3m behind front building line above 6 storeys
- 9m behind front building line above 8 storeys
- 6m behind front building line above 4 storeys, adjoining to LE1 designated Riparian zone

Figure 68 Podium Setbacks for the Bella Vista Station Precinct
Figure 69  Setbacks for the Kellyville Station Precinct
Figure 70   Podium Setbacks for the Kellyville Station Precinct
6.1.4 Streetscape and the public domain interface

Objectives
a. Development contributes to the activity, safety, amenity and quality of streets and the public domain.
b. Development addresses the street and creates a human scale for pedestrians.

Controls
1. Buildings shall address any shared open space and adjacent public areas to increase the natural surveillance of these areas and contribute to their safety and security.
2. Residential developments should address the street. Where a development comprises a number of buildings with a variety of orientations, a major part of the overall development is to face the street.
3. Building design shall avoid creating opportunities for personal concealment.
4. The siting and design of dwellings should take advantage of any views to open space, public reserves and bushland to promote natural surveillance and to enhance the visual amenity of residents. Blank courtyard walls along boundaries shared with open space or reserves should be avoided and opportunities to create and orient dwellings to permit direct views from living areas into the open space/reserve should be pursued in design.
5. Pedestrian entrances to residential flat buildings should be clearly visible from the public and semi-public areas. Lighting should be provided for safety at night. These entries contribute to the streetscape and character; therefore, they need to be considered in the design.
6. Building entries should be readily apparent from the street and clearly visible from inside the dwelling to improve casual surveillance.
7. Lighting is to be provided for safety at night for all public and semi-public entry ways.

Figure 71  Active street frontage
Source: Google Maps

Figure 72  Two storey terrace appearance to street level portion of podium.
Source: THSC
6.1.5 Residential uses on the ground and first floors

Objectives

a. To activate the street.
b. To provide for residential identity and legibility.
c. Encourage the provision of housing for a diversity of dwelling types and users.
d. To introduce a fine grain built form and architectural diversity within a street block and/or building development.
e. To provide for future flexibility in use.

Controls

1. Higher density development with residential ground and lower floor uses is to adopt a two storey terrace house appearance to present a fine grain articulation to the street frontage.
2. Residential ground floor units are to have individual gates and entrances accessed directly from the street.
3. Ground floor residential apartments are to be elevated from the street level by a minimum of 300mm and a maximum of 600mm.
4. Ground floor residential fences are to be no more than 1.2m in height with a minimum 50% transparency. Contemporary palisade fence designs in a dark recessive colour are encouraged.
5. Soft landscaping to the front of the terrace is to be a minimum of 40% of the setback area, contiguous, and a minimum of 2m in any direction.
6. Small trees suitable for the landscaped area provided are encouraged.
7. Underground car parking is not to intrude into the primary setback by more than 500mm.

Figure 73   Terrace style housing with access to street.
Source: THSC

Figure 74   Entry detail
Source: THSC
6.1.6 Podium design

**Objectives**

a. Development contributes to the activity, safety, amenity and quality of streets and the public domain.

b. Development addresses the street and creates a human scale for pedestrians.

c. Where podiums are envisaged by the zone, tower base form respects the framework of established built form, adjacent streets, parks and public or private open spaces.

d. Podium facades reinforce the intended neighbourhood character and enhance the pedestrian experience.

e. Podium form animates the street level by engaging primary and secondary street frontages appropriately.

**Controls**

1. Podium heights shall frame adjacent park land and on-site open space.

2. Tower base facades avoid blank, featureless walls by patterning high quality architectural elements, like window bays, canopies and fenestration.

3. Where entirely residential development is proposed:
   - Along primary street frontages ground floor units are grade separated (up to 600mm high) with soft screening landscaping and direct individual entrances.
6.1.7 Tower form and design

Objectives

a. Towers minimise the bulk and scale of the proposed development and reflect a slender built form.

b. Slender tower built forms are to be provided which promote:
   - open, attractive and distinct skyline;
   - small, fast moving shadows;
   - view corridors between nearby towers;
   - efficient interior climate control; and
   - balconies as an extension of indoor living space.

c. Tower form mitigates negative visual and physical impacts, including impacts on privacy, by setting back from streets, parks, open space and adjacent properties and tower forms.

Controls

1. Tower floor plate is limited to 750m² per tower (includes all services, lift and stairwell annex, etc.).
   Note: Balconies are excluded from calculations to encourage larger private outdoor space areas.

2. Tower form provides a unique profile when compared to nearby existing and proposed towers of similar height.

3. New towers are separated a minimum distance of 25m from any adjacent tower(s) where existing or approved.

4. Tower form is coordinated to off-set with adjacent existing and proposed towers to ensure:
   - prominent tower views to natural features are not obstructed; and
   - views of the sky and access to sunlight from the public realm and private open space areas are maximised.

5. Tower form is orientated to:
   - reduce the perceived mass of the building; and
   - provide privacy for both communal and private open space areas.

6. Tower façades are:
   - articulated to manage passive solar gain in summer;
   - well-glazed with functional windows where possible to reduce reliance on artificial cooling;
   - designed with high-quality sustainable materials and finishes that promote building longevity; and
   - varied in design and articulation to promote visual interest.
6.1.8 Roof design and roof features (tower caps)

Objectives

a. Roof design and roof features attractively integrate telecommunications, service structures, lift motor rooms and mechanical plants.

b. Tower caps assist in creating an attractive and interesting skyline of the precinct.

Controls

1. Where building height creates an identifiable protrusion in the skyline the following are provided:
   - a signature cap strengthening the identity as a landmark; and
   - decorative lighting that highlights key architectural features.

2. Tower cap design attractively integrates all signage, telecommunications, service structures, lift motor rooms and mechanical plants.

3. Roof features shall be designed to generate an interesting skyline and enhance views from adjoining developments and surrounding areas.

4. Lift over-runs and all other service equipment shall be incorporated into the roof design and be obscured from general view.

Figure 79  Tower Caps
Source: THSC

6.1.9 Adaptable housing

Objectives

a. To ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate changing requirements of residents.

b. To encourage flexibility in design to allow people to adapt their home as their needs change due to age or disability.

Controls

1. Residential flat buildings and multi dwelling housing are to meet the requirements for adaptable housing within Part B Section 5 Residential Flat Buildings of The Hills DCP 2012.

2. All types of residential accommodation are to consider flexibility in the design to allow adaption to meet the changing needs of residents due to ageing or disability.
6.1.10 Open space and landscaping

Objectives
a. To provide communal open space for the enjoyment by residents.

b. To maximise opportunities for landscaping, including the retention and/or planting of trees within deep soil areas to ensure a high level of amenity.

c. To assist with the management of water quality.

d. Communal space areas:
   - are accessible, useable and safe;
   - enhance the attractiveness of the development;
   - provide opportunities for social interaction; and
   - create pleasantly shaded outdoor areas.

e. Sites have sufficient space for landscaping that will complement the building form and enhance the landscape character of the street.

f. Developments provide space for recreation and for use by residents of developments.

Controls

Landscaping
1. 50% of site area - exclusive of building footprint/s, access driveways and parking. Terraces and patios within 1m of natural ground level shall be included in the calculation of landscaped open space.

2. Landscaped areas are to have a minimum width of 2m. Areas less than 2m in width will be excluded from the calculation of landscaped area.

3. Native ground covers and grasses are to be used in garden beds and path surrounds (turf is to be confined to useable outdoor areas).

Roof Gardens and Planting on Structures
1. Green walls are encouraged on podium walls along active frontages to soften the interface between future development and the public realm.

2. Rooftop gardens must be adequately enclosed and accessible to occupants of the development.

3. The design of exterior private open spaces such as roof top gardens is to address visual and acoustic privacy, safety, security, and wind effects.

4. Where roof gardens and green walls are provided, consideration should be given to the Urban Green Cover in NSW – Technical Guidelines, published by the Office of Environment and Heritage.

5. For planting guidance refer to,
   http://www.growinggreenguide.org/technical-guide/design-and-planning/plant-selection/green-roofs/

Communal Open Space
1. A minimum of 10m² per dwelling shall be provided as communal open space.

2. A minimum of 25% of the required communal open space must be located at ground level in a singular large parcel.
3. External (outside) common open space areas are to be capable of accommodating substantial vegetation and are to be designed to incorporate active and passive recreation facilities (such as seating, shade structures, BBQs and children’s play equipment).

4. External (outside) common open space areas are to be located and designed to:
   - be seen from the street between buildings.
   - provide for active and passive recreation needs of all residents.
   - provide landscaping.
   - present as a private area for use by residents only.
   - include passive surveillance from adjacent internal living areas and/or pathways.
   - have a northerly aspect where possible.
   - be in addition to any public thoroughfares.

5. Internal open space areas are to provide opportunities for larger communal gathering and/or active recreation (i.e. kitchen facilities, tables and chairs, small-scale gymnasium or health studio).

6. Plant species appropriate to the context and the specific microclimate within the development are to be selected to maximise use of endemic and native species and opportunities for urban biodiversity.

7. Drought tolerant plant species, and species that enhance habitat and ecology, are to be prioritised.

8. Landscape design is to be integrated with water and stormwater management.
6.1.11 Safety and security

Objectives
a. Building design enhances safety and security for intended users.

Controls
1. Above ground floor windows and balconies overlook all on-site pedestrian paths and communal open spaces.
2. Lighting at 4m intervals is provided along all on-site pedestrian paths and communal open spaces.
3. Entrances and exits to the street are directly accessible, illuminated and highly visible.
4. Dead-end corridors, alleyways, pathways and refuse areas are signed and secured to prevent unauthorised access.

6.1.12 Noise

Objectives
a. To ensure the amenity of future residents and workers by appropriately responding to noise impacts.

Controls
1. Site planning, building orientation and interior layout is to lessen noise intrusion as far as possible.
2. Attenuation of noise at the source is preferred. Applicants are to indicate measures undertaken to mitigate the impact of noise upon adjacent residents and / or workers.
3. It is preferable that noise attenuation measures will last for a minimum of 10 years or the life of the development proposal, before being upgraded to meet current standards as required.
4. A Noise Impact Assessment prepared by a suitably qualified consultant may be required when submitting a development application for a new development or the renovation of an existing development.
5. The provisions of State Environmental Planning Policy (Infrastructure) 2007 and Development near Rail Corridors and Busy Roads Interim Guideline must be taken into consideration to minimise impacts of busy roads and railway corridors on residential and other sensitive development.
6. Development applications are to demonstrate how buildings comply with the noise criteria specified in Table 9.

Table 9 Noise criteria

<table>
<thead>
<tr>
<th>Internal Space</th>
<th>Recommended Noise Criteria</th>
<th>Noise</th>
<th>Maximum noise criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living areas</td>
<td>40 dBA</td>
<td>45 dBA</td>
<td></td>
</tr>
<tr>
<td>Working areas</td>
<td>35 dBA</td>
<td>40 dBA</td>
<td></td>
</tr>
<tr>
<td>Sleeping areas</td>
<td>35 dBA</td>
<td>40 dBA</td>
<td></td>
</tr>
</tbody>
</table>
6.1.13 Vehicular and pedestrian access

Objectives

a. Vehicles enter and exit developments in a safe and efficient manner.
b. Visual impacts of access and parking facilities on the public realm are minimised.
c. Pedestrian and cycle access to, from and through development is simple, safe and direct.

Controls

Vehicular Access

1. Car parking shall be provided at the rates identified within Part 8 of this section of the DCP.
2. Adequate vehicular entry and exit and circulation areas are to be provided. The design must:
   - Provide a safe environment for both pedestrians and vehicles using the site and surrounding road networks;
   - Ensure vehicular ingress and egress to the site is in a forward direction at all times;
   - Provide for service vehicles where possible; and
   - Be designed to minimise the visual impact of hard paved areas.
3. The driveway shall be centrally located within the development and be a minimum of 10 metres from any side boundary or street.
4. Driveways are to have a minimum width of 6 metres at the property boundary for a distance of 6 metres within the development to ensure easy entry/exit of vehicles.
5. Parking shall be provided underground or at the rear of buildings.

Pedestrian Access

1. Developments in excess of 10 units are to provide pedestrian access from the street separate from the vehicular access.
2. Pedestrian links may be required to be provided through the site as part of the development to increase the connectivity of the area for local pedestrians. The following factors shall be considered:
   - The link must be no less than 3m wide;
   - It should be a straight-line link through the site linking streets or other public spaces; and
   - The link shall not include stairs.
3. The design and layout of any building adjoining and landscaped spaces adjoining the pathway shall ensure there is natural surveillance of the pathway to protect the amenity of users. Solid fences will not be permitted along the boundary of the pathway as they will restrict passive surveillance over the pathway.
4. Pedestrian links must be subject to a legal right of public access.

Garages

1. Where possible, any ground level car parking, garages and/or basement garage doorways should be screened from public areas by planting.
6.2 Terrace housing (attached housing)

6.2.1 Site requirements and layout

Objectives
a. To achieve a high standard of amenity for future residents.
b. Development sites have sufficient area to provide adequate access, parking and landscaping.
c. To minimise impact on the amenity of neighbouring sites.
d. To allow a range of allotment types to suit most household types and allow for diversity.
e. To provide a distinct urban character this is sympathetic to existing and new development.
f. Subject to council discretion all terraces are to be rear loading.

Controls
1. Sites shall have minimum site depth of 30m (exclusive of land required for rear laneway access).
2. Terrace housing shall be provided within the periphery of the Precinct on land zoned R3 Medium Density Residential.
3. All dwellings with a frontage to the street (including a secondary street) must address the street.
6.2.2 Building height

*Objectives*

a. Terraces integrate with the character of surrounding development and are of a high architectural quality.
b. Designs reduce the visual bulk of buildings from the street.
c. The scale of terrace development reinforces the desired future neighbourhood character.

*Controls*

1. The maximum building height is to be in accordance with The Hills LEP 2012, clause 4.3 (Height of Buildings).
2. Terrace houses are to be a minimum of 2 storeys and a maximum of 3 storeys inclusive of attic rooms.

6.2.3 Building setbacks

*Objectives*

a. Developments contribute to an attractive and diverse neighbourhood that is characterised by tree-lined streets, high quality landscaping and innovative building design that reinforces the desired future neighbourhood character.
b. To provide strong definition to the public domain and create a consistent streetscape.
c. To alleviate impacts on amenity including privacy, solar access, acoustic control and natural ventilation within the development and adjoining neighbours.

*Controls*

1. Setbacks shall be provided in accordance with the following table.

<table>
<thead>
<tr>
<th>Setbacks – Terraces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front setbacks</td>
</tr>
<tr>
<td>• 3m to front building line for the first and second storey</td>
</tr>
<tr>
<td>• 4m to front building line for the third storey</td>
</tr>
<tr>
<td>Front articulation zone</td>
</tr>
<tr>
<td>• Minor façade elements such as balconies, porches or verandahs may be 2m forward of front building line. On corner blocks the articulation zone may be extended along the secondary frontage for a max of 3m or 25% of façade length with a min. of 1m setback from boundary.</td>
</tr>
<tr>
<td>Side and rear setbacks</td>
</tr>
<tr>
<td>• 0m between terraces</td>
</tr>
<tr>
<td>• 3m from side property boundary (end terraces)</td>
</tr>
<tr>
<td>Rear Setback</td>
</tr>
<tr>
<td>• 1-2 storey element</td>
</tr>
<tr>
<td>• 3 storey element</td>
</tr>
<tr>
<td>• Garages of rear lanes</td>
</tr>
<tr>
<td>• 8m</td>
</tr>
<tr>
<td>• 10m</td>
</tr>
<tr>
<td>• 0.5m</td>
</tr>
</tbody>
</table>
6.2.4 Building design and streetscape

Objectives

a. To achieve variety in architectural design and character across the Precinct.

b. To achieve buildings that incorporate a variety of sizes and architectural expressions, articulation, massing and character so that the street block presents as a group of buildings rather than a singular architectural design or building.

c. To incorporate high quality façade design and finishes.

d. Terraces integrate with the character of surrounding development and are of a high architectural quality.

e. Designs reduce the visual bulk of buildings from the street to reinforce the desired future neighbourhood character.

f. Developments provide useable private open space areas to improve the amenity for future residents.

Controls

1. Each dwelling is to include individual access from the main street frontage.

2. Building entry must be integrated with building façade design. At street level, entry is to be articulated with awnings, porticos, recesses or projecting bays for clear identification. The entry path to the building is to be accessible and visible from the street.

3. The minimum internal floor area for each dwelling, excluding common passageways, car parking spaces and balconies shall be as follows:

<table>
<thead>
<tr>
<th>Dwelling Type</th>
<th>Minimum Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bedroom dwelling</td>
<td>75m²</td>
</tr>
<tr>
<td>2 bedroom dwelling</td>
<td>110m²</td>
</tr>
<tr>
<td>3 bedroom dwelling</td>
<td>135m²</td>
</tr>
</tbody>
</table>

4. For strata developments, a minimum of 10m³ storage space is to be provided for each dwelling in either a lockable garage or a basement. Storage areas shall have a minimum base of 5m² and minimum width of 2m.

5. The minimum width of each dwelling is 6m.

6. The maximum building length is 50m (block of attached terraces). Provide a 4m gap between frontages greater than 32m. Provide a 2m gap between changes in continuous terrace frontage and single lot housing, duplexes or townhouses.
7. Waste collection is to be undertaken from the rear laneway.
8. Bin storage areas must be located so that bins can be easily wheeled to the rear laneways for collection.
9. Hedge and shrub planting or open style fencing shall be provided along the street frontage. Where proposed, the height of front fences should not exceed:
   - 0.9m for solid masonry fences; and
   - 1.2m for open or transparent style fences with 50% min. permeability / and or hedges.
   - Chainlink, sheet metal or timber paling fencing is not permitted to front or secondary frontages.
10. Side and rear fences are to be a maximum of 1.8m in height.
11. Front fencing and courtyard walls are permitted on the boundary line. Courtyard walls are only permitted on secondary frontage to corner lots.
12. Minimise direct overlooking of main internal living areas and private open space of dwellings both within and adjoining the development through building design, window locations and sizes, landscaping and other screening devices.
13. Rear laneways to provide for low maintenance soft landscaping treatments to reduce impact of hardscaped surfaces and wall treatments.

Figure 83  Vegetated rear lane  
Source: THSC

Figure 84  Pedestrian walkthroughs between terraced groups Kingston,  
Source: THSC

Figure 85  Terrace style housing  
Source: Unknown

Figure 86  Terrace Style Townhouse  
Source: Google Streetview

Draft September 2017
### 6.2.5 Open space and landscaping

**Objectives**

a. To cater for the recreational needs of building occupants.

b. To improve amenity and soften the impact of buildings through the provision of landscaping, including the retention and/or planting of trees within deep soil zones.

c. A high level of amenity for residents is achieved through the provision of sufficient solar access, natural ventilation, privacy and open space.

**Controls**

1. Minimum 16m² private open space (POS) for each dwelling with a minimum dimension of 3m. Must be located at ground level at the rear of the dwelling directly accessible from the main living area.

2. 60% of the private open space area shall comprise deep soil planting and be located such that a canopy tree can be planted.

3. 40% of front setback area shall comprise soft landscaping.

4. Landscaped areas are to have a minimum contiguous width of 2m within front setback.

5. Roof terraces and roof gardens are encouraged where the privacy of adjoining properties can be maintained.

6. The siting of dwellings is to provide good solar access to private open space and is not to adversely impact upon the solar access of adjacent dwellings private open space.

7. At least 50% of the required private open space for each dwelling and adjacent dwellings is to receive direct sunlight for a minimum of 3 hours between 9am and 3pm on 21 June.

8. Collapsible or permanent clothes drying device is to be provided within private open space areas and located to maximise the amount of direct sunlight received.
6.2.6 Rear laneways

**Objectives**

a. To facilitate orderly development within the R3 Medium Density zone through the provision of rear laneways.

b. To provide vehicular access to the rear or side of lots to reduce garage dominance in residential streets.

c. To reduce vehicular conflict through reduced driveway cross overs and focusing of traffic to known points.

d. To enable garbage collection along street frontages.

e. To facilitate the use of attached and narrow lot housing to achieve an attractive streetscape.

**Controls**

1. Rear laneways shall be provided in accordance with the Indicative Street Network and Hierarchy figure of this section of the DCP.

2. Where rear laneways are not achievable (for single row terraces only), and underground parking is an option, the entry is to not adversely impact upon the streetscape or pedestrian right of way. Driveway entries from the street frontage are not desirable and are subject to council discretion.

3. The design and construction of laneways is to be consistent with Figure 90.

4. The laneway is a public “shareway” as the paved surface is for cyclists, pedestrians and cars etc, with a 10 km speed limit and driveway-style crossovers to the street rather than a road junction.

5. On-street car parking within the rear laneway carriageway shall not be permitted.
6. The minimum garage doorway widths for manoeuvrability in this laneway section are 2.4m (single) and 4.8m (double).

7. Rear laneway design shall have regard to the following lot layouts. Entry way sightlines are to end with a landscaped treatment or the continuation of the laneway.

8. Laneways that create a ‘fronts to backs’ layout (front addressed principal dwellings on one side and rear accessed garages on the other side) are to be avoided.

9. All lots adjoining a laneway should utilise the laneway for vehicular/garage access (refer Figure 92).

10. Terraces shall be designed so as to facilitate passive surveillance along the rear laneway through the positioning of windows and balconies facing the laneway.

Figure 90 Rear Laneway Principles
Source: North Kellyville DCP
**Figure 91** Sample Lane Sections
Source: North Kellyville DCP

**Figure 92** Rear lane outcome to be avoided
Source: THSC
7 Car and bicycle parking

7.1 Car parking

Objectives

a. To provide sufficient parking spaces for development while encouraging public transport use.
b. To ensure that car parking is appropriately located.

Controls - General

1. Car parking spaces are to be provided at the rates specified in parking rates table below. For any use not specified, the car parking rates in The Hills Development Control Plan 2012 (Part C Section 1 - Parking) shall apply.

Table 10 Car parking rates – all land uses

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwellings – detached, attached and semi-detached</td>
<td>1 space per dwelling (minimum)</td>
</tr>
<tr>
<td>Multi dwelling housing</td>
<td>To comply with the rates in Part C Section 1 – Parking.</td>
</tr>
<tr>
<td>Residential flat buildings, and dwellings in shop top housing</td>
<td>1 resident space per unit and 1 visitor space per 4 units.</td>
</tr>
<tr>
<td>All other uses</td>
<td>To comply with the rates in Part C Section 1 – Parking.</td>
</tr>
</tbody>
</table>

Controls – Residential Flat Buildings and Shop Top Housing

2. For residential flat buildings and shop top housing, the following is required:
   - Parking is to be underground and generally within the footprint of the building above.
   - Where above ground parking cannot be avoided due to site conditions, it must be well integrated into the overall façade design and create a good relationship to the public domain.

3. Garages and parking structures are not to project forward of the building line and are to be screened from the public domain by active uses.

4. Any parking located within the front setback area must be suitably landscaped to add positively to the streetscape.

5. Car share spaces are encouraged within residential flat buildings and shop top housing developments. Car share spaces are to be for the exclusive use of car share scheme vehicles, and included in the number of car parking spaces permitted on a site. The car share parking spaces are to be:
   - exclusive of visitor car parking;
   - retained as common property by the Owners Corporation of the site, and not sold or leased to an individual owner/occupier at any time;
   - made available for use by operators of car share schemes without a fee or charge;
   - grouped together in the most convenient locations relative to car parking entrances and pedestrian lifts or access points;
   - located in well-lit places that allow for casual surveillance;
signposted for use only by car share vehicles; and
made known to building occupants and car share members through appropriate signage which indicates the availability of the scheme and promotes its use as an alternative mode of transport.

Development Applications are to demonstrate how the car share parking space(s) is to be accessed, including where access is through a security gate. A covenant is to be registered with the strata plan advising of any car share parking space. The covenant is to include provisions that the car share parking space(s) cannot be revoked or modified without prior approval of Council.

**Controls – Terrace Housing**

1. All terrace housing shall be accessed via a rear laneway.
2. Garages are to face the rear lane.
3. Where basement car parking is provided, the parking area is to be accessed by a single front driveway. The car park entry is to be integrated with the building design.
4. Basement car parking is to be consolidated under building footprints to maximise opportunities for deep-soil planting on the site.
5. Basement car parking must not protrude more than 0.5m above the natural ground level.
6. Where basement car parking is provided, waste collection shall occur within the basement car park.

**7.2 Bicycle parking**

**Objectives**

a. To ensure that bicycle parking is considered and provided appropriately in all developments.
b. To ensure that end of trip facilities such as change rooms, showers and secure areas for bicycle parking are provided in new buildings featuring employment uses.

**Controls**

1. Secure, conveniently located bike parking facilities are to be provided at the rates specified in Table 9 below.
2. End of trip facilities such as change rooms, showers and secure areas for bicycle parking are to be provided within employment development.

**Table 11 Bicycle Parking rates**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Bicycle parks rate (minimum)</th>
</tr>
</thead>
</table>
| Residential flat buildings | 1 space per 3 apartments  
1 space for 12 apartments for visitors |
| Industrial        | 1 space per 1500m² GFA for staff                             |
| Commercial        | 1 space for 600m² GFA for staff                              |
| Shops/cafes/restaurants | 1 space per 450m² for staff                                  |
Appendix A: Housing Diversity

As the Hills Shire population grows there will be greater reliance on higher density development to accommodate future housing demand. A more sustainable Sydney is a more compact Sydney and more new homes in the future will be in the form of higher density developments. More people need to be able to choose to live, raise families and retire to an apartment located in an area of high accessibility and amenity.

The Hills Shire Council is expected to be home to an additional 37,934 households between 2016 and 2036 and population forecasts indicate that 23,519 (or 62%) of these will be ‘larger’ household types such as couples with children, single parents with children and multiple family households. It will be critical that future high density development provides ‘dwelling diversity’ to ensure the market caters for the different living needs, expectations and household budgets within the community. This will require the provision of an appropriate mix of one, two and three bedroom apartments which are varied in size.

Apartment buildings are a long term building stock so it is very important that if they are to be built, they are resilient over the long term. Unlike detached housing where landowners can choose the style and size of their home, a homeowner wanting an apartment can only choose from what is being provided. Whilst smaller apartments should be provided to meet the needs of a certain demographic within the market, moderate and larger apartments should also be provided to meet the latent demand for this housing option. This will then reduce pressure on smaller, more affordable housing options.

In order to achieve appropriate housing diversity within the Corridor, a floor space incentive provision has been established within The Hills Local Environmental Plan 2012 which permits additional floor space for developments that provide the required mix of apartment types and sizes.

This document provides an overview as to why the housing diversity provision has been prepared, how it was prepared, and how it should be applied. This document will assist applicants, consent authorities and community in understanding the intent behind the housing diversity provision.

1. Housing Diversity within the Sydney Metro Northwest Corridor

As part of the planning for the Sydney Metro North West Corridor, a development incentive provision has been implement which will facilitate:

- the delivery of at least 20% of future apartment development in the form of three or more bedroom apartments and
- at least 40% of all future two and three bedroom apartments will be at a larger apartment adopted size.

This will provide a greater diversity of product and will help meet the future housing needs of our community. The application of the development incentive provision to the Bella Vista and Kellyville Precincts is outlined below.

1. All land is subject to a ‘base’ floor space ratio which is identified on the Floor Space Ratio Map. From a Precinct wide perspective, the application of the Base Floor Space Ratios will deliver approximately 8,400 dwellings between the two Precincts.
2. Land within the Kellyville and Bella Vista Precincts are also assigned with an “incentivised” floor space ratio through an Incentive Floor Space Ratio Map. The incentivised floor space ratio will facilitate a total of around 12,000 additional dwellings within the Kellyville and Bella Vista Precincts, which equates to 3,600 more dwellings that would be achievable under the ‘base’ floor space ratio.

For ease of reference all land that is also subject to an incentivised floor space is identified as ‘Area A’ on the Floor Space Ratio Map.

Development will only be permitted at the ‘incentivised’ floor space ratio if it satisfies the requirements set out within Clause 7.12 ‘Dwelling Mix and Diversity within the Sydney Metro Northwest Corridor’. In summary the provision requires the following:

a) Maximum of 25% of all dwellings to be studio or one bedroom apartments;
b) Minimum of 20% of all dwellings to be three or more bedroom apartments;
c) 40% of all two and three bedroom apartments to comply with a minimum apartment size set by Council (110m² for two bedrooms and 135m² for three bedrooms); and

d) Parking rates to be 1 space per apartment and 1 visitor space per 5 apartments.

Development that does fully comply with the above requirements will only be permitted to develop at the ‘base’ floor space ratio, as identified on the Floor Space Ratio Map.

The incentivised unit mix and size requirements will ensure that the original anticipated yield of 8,400 between the precincts is still achievable at SEPP 65 sizes.

The following table provides a breakdown of the 12,000 additional dwellings within the Kellyville and Bella Vista Precincts in accordance with the new mix and size requirement. The incentive provision would facilitate the delivery of approximately 70% at SEPP 65 sizes and 30% of the apartments at the larger apartment size. As 2 and 3 bedroom apartments would comprise around 75% of apartments, 40% of 2 and 3 bedroom apartments would equate to approximately 30% of the overall number of units within the Precinct.

<table>
<thead>
<tr>
<th>Unit Mix</th>
<th>Unit Size</th>
<th>% of Total Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bed</td>
<td>SEPP 65</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Council</td>
<td>0%</td>
</tr>
<tr>
<td>2 Bed</td>
<td>SEPP 65</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Council</td>
<td>22%</td>
</tr>
<tr>
<td>3 Bed</td>
<td>SEPP 65</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Council</td>
<td>8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Units</th>
<th>% of Total Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000</td>
<td>100%</td>
</tr>
<tr>
<td>Total SEPP 65 Sized Units</td>
<td>70%</td>
</tr>
<tr>
<td>Larger Sized Units</td>
<td>30%</td>
</tr>
</tbody>
</table>

Figure B1
Hypothetical Development Scenario with New Apartment Size Requirement

The delivery of around 30% of the apartments at the larger sizes will facilitate an appropriate diversity of housing stock and will provide developers with sufficient flexibility to determine the sizes
for the remaining units. The provision will facilitate a greater level of apartment diversity than what would be achieved if development was only subject to the minimum apartment area requirements within SEPP 65 and the Apartment Design Guide.

3. State Environmental Planning Policy No. 65

State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development (SEPP 65) has been prepared to promote better apartment design across the State. The policy aims to deliver a better living environment for the residents now choosing this form of housing, and enhance our streetscapes and our neighbourhoods across the State.

SEPP 65 establishes nine design quality principles which are intended to ensure high quality development outcomes and more liveable urban areas. The SEPP 65 design quality principles must be considered by design professionals when designing residential apartment development, by design review panels when giving advice on proposals and by consent authorities. The nine principles are listed below:

- Principle 1 – Context and Neighbourhood Character;
- Principle 2 – Built Form and Scale;
- Principle 3 – Density;
- Principle 4 – Sustainability;
- Principle 5 – Landscape;
- Principle 6 – Amenity;
- Principle 7 – Safety;
- Principle 8 – Housing Diversity and Social Interaction
- Principle 9 – Aesthetics.

In determining a development application for consent to carry out development to which this Policy applies, a consent authority is to take into consideration (in addition to any other matters that are required to be, or may be, taken into consideration):

a) the advice (if any) obtained from the design review panel, and
b) the design quality of the development when evaluated in accordance with the design quality principles, and

c) Apartment Design Guide.

Through the Design Principles, SEPP 65 recognises that housing diversity is a critical design requirement when assessing applications for high density development. Principle 8 – Housing Diversity and Social Interaction provided the following.

- Principle 8 – Housing Diversity and Social Interaction
  
  Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

  Well-designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

  Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.
As outlined within the principle, well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. The approach being implemented within the Sydney Metro Northwest Corridor is directly consistent with this Principle as the provisions have been prepared having regard to the future demographic characteristics of the Shire.

4. Housing to Meet the Needs of the Future Hills Shire Population

The housing diversity provision which is being applied within the Sydney Metro Northwest Corridor has been prepared to ensure that the future housing stock is appropriate to meet the needs of the future population.

There are two critical and equally important issues being diversity of mix (i.e. 1 bedroom, 2 bedroom and 3+ bedrooms) and diversity of mix of size (provision of a mix of small, moderate and larger apartments).

Ensuring a Diversity of Apartment Mix

The following table identifies the projected household types for The Hills Shire from the Department of Planning and Environment’s ‘Household and Implied Dwelling Projection Data (2014)’.

<table>
<thead>
<tr>
<th>Household Type</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
<th>2026</th>
<th>2031</th>
</tr>
</thead>
<tbody>
<tr>
<td>Couple only</td>
<td>13,750</td>
<td>16,250</td>
<td>18,650</td>
<td>21,050</td>
<td>23,450</td>
</tr>
<tr>
<td>Couple with children</td>
<td>30,350</td>
<td>34,150</td>
<td>38,250</td>
<td>42,400</td>
<td>45,950</td>
</tr>
<tr>
<td>Single parent</td>
<td>4,350</td>
<td>5,050</td>
<td>5,850</td>
<td>6,700</td>
<td>7,550</td>
</tr>
<tr>
<td>Other family households</td>
<td>650</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td>1,050</td>
</tr>
<tr>
<td>Multiple-family households</td>
<td>1,600</td>
<td>1,850</td>
<td>2,150</td>
<td>2,400</td>
<td>2,600</td>
</tr>
<tr>
<td>Lone person</td>
<td>5,450</td>
<td>6,700</td>
<td>8,050</td>
<td>9,600</td>
<td>11,200</td>
</tr>
<tr>
<td>Group</td>
<td>750</td>
<td>850</td>
<td>900</td>
<td>1,000</td>
<td>1,100</td>
</tr>
<tr>
<td>Total</td>
<td>56,900</td>
<td>65,600</td>
<td>74,600</td>
<td>84,000</td>
<td>92,900</td>
</tr>
</tbody>
</table>

Figure B2
Household Type Projections
NSW Department of Planning and Environment

Based on the above projections, by 2031 approximately 62% of households within The Hills Shire will be a family household including couples with children, single parents with children and multiple family households. Accordingly, it is reasonable to assume that approximately 62% of the additional housing stock that will be provided within The Hills Shire by 2031 will need to be capable of accommodating these household.

The Draft North West Subregional Strategy, prepared in December 2007, set The Hills Shire a target of an additional 36,000 dwellings by 2031. Council’s Local Strategy and Residential Direction demonstrated how this target would be predominately met through the provision of 35,925 new dwellings in existing urban areas, the North West Growth Centre and the release areas of Kellyville/Rouse Hill and Balmoral Road. It should be noted that the dwelling targets represented Council’s projected yield at the time of preparing its Local Strategy in June 2008, prior to the Government commitment to the delivery of the Sydney Metro Northwest.

Of the original dwelling target, approximately 4,600 were planned on land south of the M2 Motorway, on land which has now been transferred to the Parramatta City LGA. This land included Carlingford, Northmead, North Rocks, North Parramatta and Oatlands. As this analysis is principally focussed on ensuring that housing within The Hills Shire is sufficient to meet the needs of the future Hills Shire population, planned growth and approvals on land south of the M2 Motorway has been excluded from this analysis.
The following table provides a summary of the Shire’s current dwelling targets, the additional growth opportunities which have arisen since the targets were established and Council’s progress toward achieving its targets. It is noted that the planned dwellings and past approval figures have been adjusted to account for land that has transferred to Parramatta City Council.

<table>
<thead>
<tr>
<th>SUMMARY</th>
<th>Planned Dwellings (Total)</th>
<th>Planned Apartments</th>
<th>Planned Low and Medium Density Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Dwellings 2004-2031</td>
<td>31,375</td>
<td>5,623</td>
<td>25,752</td>
</tr>
<tr>
<td><strong>Additional Growth Opportunities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baulkham Hills Town Centre</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
</tr>
<tr>
<td>Rural Subdivision</td>
<td>700</td>
<td>0</td>
<td>700</td>
</tr>
<tr>
<td>Box Hill North</td>
<td>4,600</td>
<td>645</td>
<td>3,955</td>
</tr>
<tr>
<td>Hills Corridor Strategy</td>
<td>16,050</td>
<td>15,604</td>
<td>446</td>
</tr>
<tr>
<td><strong>Revised Dwelling Supply 2004+</strong></td>
<td>53,725</td>
<td>22,872</td>
<td>30,853</td>
</tr>
<tr>
<td>Actual Dwellings 2004-2016</td>
<td>15,791</td>
<td>4,570</td>
<td>11,221</td>
</tr>
<tr>
<td><strong>Revised Dwelling Projection 2016+</strong></td>
<td>37,934</td>
<td>18,302</td>
<td>19,632</td>
</tr>
</tbody>
</table>

**Figure B3**
Dwelling Targets and Residential Activity

When accounting for the additional growth opportunities and actual dwellings that have been approved since 2004, a revised dwelling projection of approximately 37,934 dwellings could be achieved within The Hills Shire from 2016, of which 18,302 dwellings (48%) would be apartments.

The following table provides justification for requiring at least 20% of future high density apartments within The Hills Shire as 3 bedroom units.

**Figure B4**
Justification for Apartment Mix

Of the 37,934 additional dwellings projected within The Hills Shire from 2016, approximately 23,519 (62%) will need to be able to accommodate a family household. It is assumed that the 19,610 dwellings within the low and medium density residential areas will be capable of accommodating family households. This means that the remaining 3,909 family households will need to be accommodated within high density apartments which equates to approximately 21% of the future high density apartment stock.
Having regard to the above analysis, the incentive provision being applied within the Corridor requires a minimum of 20% of the future apartment stock incorporates 3 or more bedrooms. This will ensure that the housing stock matches the needs of the Shire’s future households.

**Ensuring a Diversity of Apartment Size**

It is imperative that an appropriate mix of apartment sizes is produced so as to facilitate housing diversity within the marketplace. Having a diverse housing stock will provide improved housing choice for the future Hills Shire residents and will ensure that the apartments which are produced cater for a wider range of households with varying needs, expectations and living requirements.

In order to ensure that an appropriate diversity of apartment sizes is being produced within the Corridor, the incentive provision requires a proportion of 2 and 3 bedroom apartments to be at the larger apartment size. The requirement would require the following:

- at least 40% of 2 bedroom dwellings forming part of the development have a minimum internal floor area of 110m²; and
- at least 40% of 3 bedroom dwellings forming part of the development have a minimum internal floor area of 135m².

So long as 40% of 2 bedroom apartments have an area of 110m² and 40% of 3 bedroom apartments have a minimum area of 135m², developers will have full discretion with respect to the distribution of sizes for the remaining apartments.

The incentive provision would facilitate the delivery of approximately 70% at SEPP 65 sizes and 30% of the apartments at the larger apartment. As 2 and 3 bedroom apartments would comprise around 75% of apartments, 40% of 2 and 3 bedroom apartments would equate to approximately 30% of the overall number of units within the Precinct.

As previously mentioned, Principle 8 of SEPP 65 requires that ‘Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets’. Accordingly, requiring a mix of apartment sizes, including a proportion of larger apartments, is consistent with this principle as it will ensure that an appropriate diversity of apartment sizes is provided to suit different needs and budgets.
Appendix B: North West Rapid Transit – Road Profiles and Locations

Bella Vista Precinct
Celebration Drive

Typical Cross Section Celebration Drive (West of Precinct Street A)

Typical Cross Section Celebration Drive (East of Old Windsor Road)

Typical Cross Section Celebration Drive (East of Service Station Location)
Other Precinct Streets
Bella Vista and Kellyville Station Precincts Development Control Plan

Kellyville Precinct

[Map of the Kellyville Precinct with various area labels and features, including future development sites and road networks.]

Draft August 2017
Other Precinct Streets

TYPICAL CROSS SECTION
PRECINCT STREET B BETWEEN PRECINCT D & F
SCALE 1:100

TYPICAL CROSS SECTION
PRECINCT STREET B BETWEEN PRECINCT D & E
SCALE 1:100

Draft August 2017