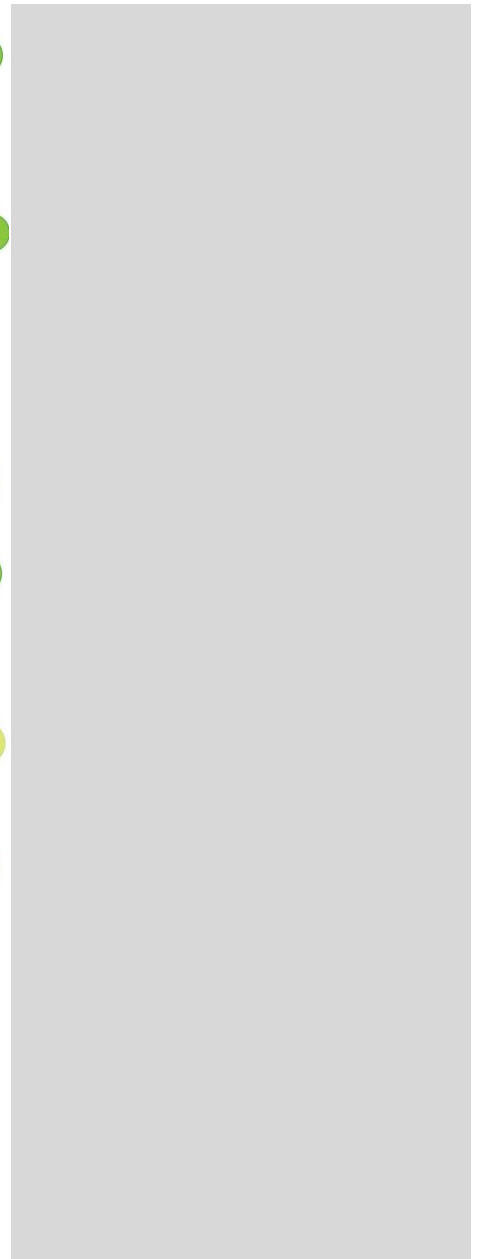
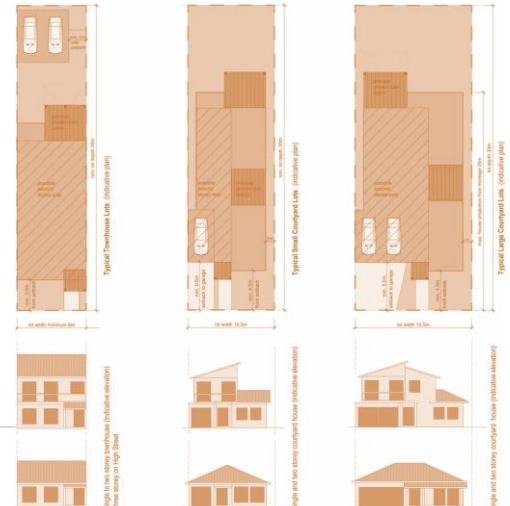


Minmi East Precinct Development Guidelines



Prepared by RPS

November 2014



Minmi East Precinct Development Guidelines

Relationship with Concept Approval MP 10_0090

The Minmi East Precinct Guidelines (herein referred to as the Guidelines) are standalone guidelines prepared under the terms of Concept Approval MP 10_0090. However the Guidelines have been prepared in a form which will enable adoption of the provisions as site specific controls within Newcastle Development Control Plan 2012 (Newcastle DCP 2012) at a future date.

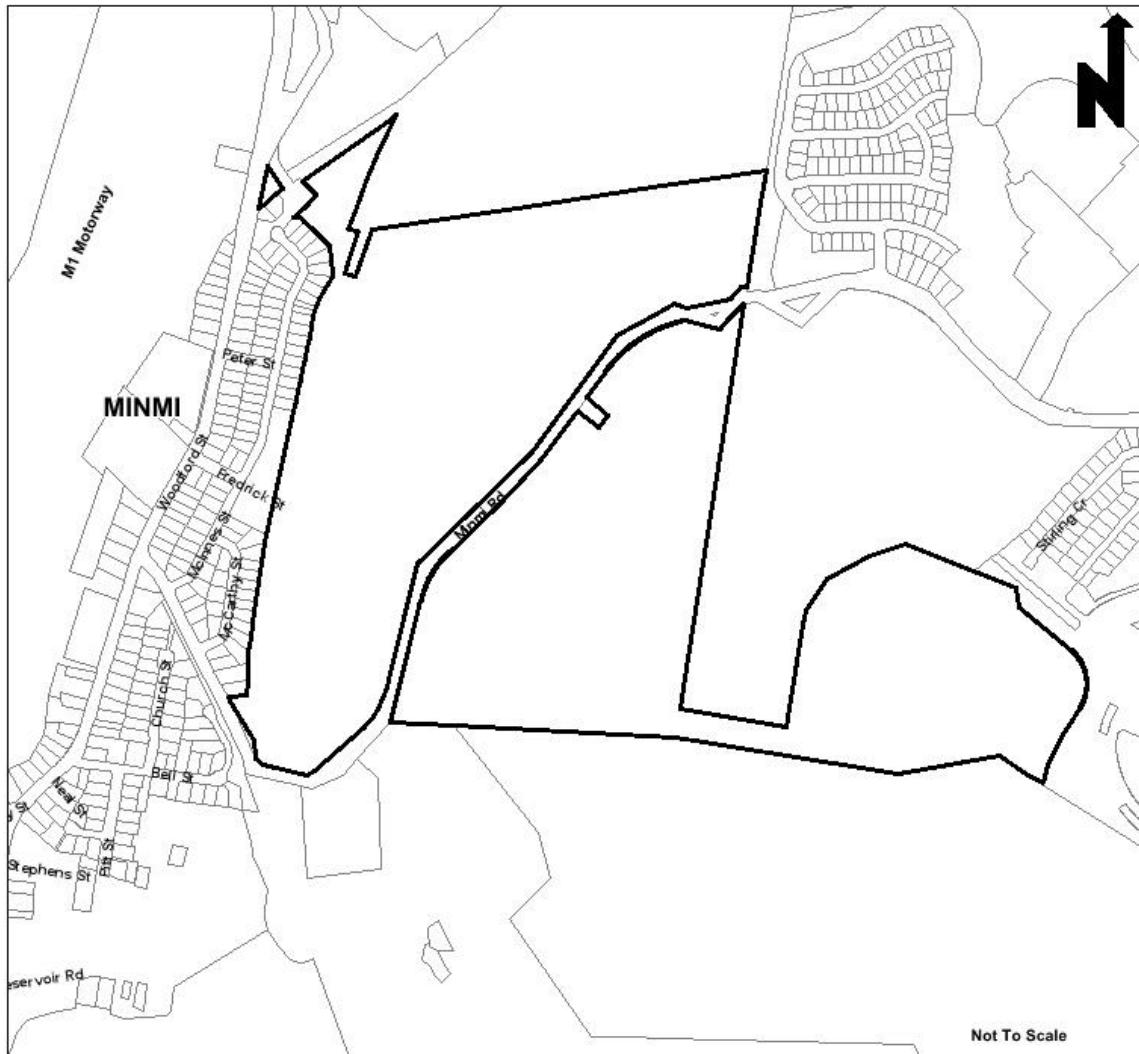
The Guidelines, as well as the Concept Plan Urban Design Guidelines (known as Appendix A and Appendix B of *Minmi, Link Road and Stockrington Concept Plan Environmental Assessment* prepared by Urbis dated February 2011 and subsequently updated versions of the Concept Plan Urban Design Guidelines known as Appendix A dated May 2014 and Appendix B dated November 2014) have been prepared to collectively satisfy the requirements of Condition 1.13 of Concept Approval MP 10_0090. Concept Approval MP 10_0090 applies to land within the Minmi East Precinct, as well as surrounding lands within the Newcastle, Lake Macquarie and Cessnock local government areas. The Concept Approval includes approval in summary for:

- A five stage development with up to 3,300 dwellings across the 520 ha development site;
- Supporting commercial / retail development of up to a total of 8,000 sqm within a new village centre and high street centre;
- Urban design guidelines subject to further modifications;
- Dedication of approximately 1,561 ha of conservation lands to the NSW Government;
- Indicative staging; and
- Associated infrastructure.

Land to which the Guidelines applies

The Guidelines apply to all land within the heavy line marked on **Map 1 – Minmi East**.

Map 1: Minmi East



Development (type/s) to which the Guidelines applies to

The Guidelines apply to all development within Minmi East requiring development consent.

Applicable environmental planning instruments

The provisions of *Newcastle Local Environmental Plan 2012* also apply to development applications to which the Guidelines apply to. In the event of any inconsistency between the Guidelines and the above listed environmental planning instrument, the environmental planning instrument will prevail to the extent of the inconsistency.

Relationship to Newcastle DCP 2012

The Guidelines identify provisions that may be a departure from provisions contained in the Newcastle DCP 2012. In the event that any inconsistency arises from the reading of the

Guidelines with the Newcastle DCP 2012, the development controls and objectives in the Guidelines will prevail to the extent of the inconsistency.

The following sections of the Newcastle DCP 2012 **will** also apply to development to which the Guidelines apply, noting the above paragraph with respect to any inconsistencies that may arise.

- Any applicable land use specific provision under Part 3.00;
- 7.02 Landscape Open Space and Visual Amenity, except for Townhouse and Small Courtyard lots as defined in **Table 1**, where controls are provided within this Guideline;
- 7.03 Traffic, Parking and Access;
- 7.05 Energy Efficiency;
- 7.06 Stormwater;
- 7.07 Water Efficiency; and
- 7.08 Waste Management.

The following sections of the Newcastle DCP 2012 **may** also apply to development to which the Guidelines apply, noting the above paragraph with respect to any inconsistencies that may arise.

- 4.01 Flood Management – all land which is identified as flood prone land under the Newcastle Flood Policy or within a PMF or area likely to flood;
- 4.02 Bush Fire Protection – within mapped bushfire area/zone;
- 4.03 Mine Subsidence – within mine subsidence area;
- 4.04 Safety and Security – development with - accessibility to general public, access to laneways, communal areas, or residential with three or more dwellings;
- 4.05 Social Impact – where required under ‘Social Impact Assessment Policy for Development Applications’, 1999;
- 5.01 Soil Management – works resulting in any disturbance of soil and/or cut and fill;
- 5.02 Land Contamination – land on register/where risk from previous use;
- 5.03 Tree Management – trees within 5m of a development footprint or those trees likely to be affected by a development;
- 5.04 Aboriginal Heritage – known/likely Aboriginal heritage item/site and/or potential soil disturbance;
- 5.05 Heritage Items – known heritage item or in proximity to a heritage item;
- 5.06 Archaeological Management – known/likely archaeological site or potential soil disturbance; and
- 7.04 Movement Networks – where new roads, pedestrian or cycle paths are required

Associated technical manual/s

Nil

Additional information

- Concept Approval (MP10_0090) for land at Minmi, Link Road and Stockrington;
- Coal and Allied Northern Estates Minmi – Link Road Concept Plan Design Guidelines by RPS (Appendix A, dated May 2014); and
- Coal and Allied Northern Estates Minmi – Link Road Urban Design Guidelines by RPS (Appendix B dated November 2014).
- Minmi / Link Road and Stockrington Estate Noise Mitigation Review, Renzo Tonin and Associates, 21 October 2013.

Definitions

A word or expression used in this development control plan has the same meaning as it has in *Newcastle Local Environmental Plan 2012*, unless it is otherwise defined in this development control plan.

Aims of the Guidelines

1. To ensure that the Minmi East Precinct is developed in accordance with the Concept Approval (MP10_0090) for the site.
2. To ensure a general contemporary urban village character, within a setting characterised by natural water bodies and native vegetation within the area, is provided.
3. To ensure connectivity between Blue Gum Hills Regional Park, High Street and the sporting complex is achieved through a network of open spaces and pedestrian routes within the site.
4. To contribute to the projected growth of the Precinct and strengthen the local employment base.
5. To manage nutrient or stormwater flow rates to ensure the health of Minmi Creek and other waterways.
6. To conserve reasonably undisturbed bushland.

1 Urban Structure

Subdivision within Minmi East

Objectives

1. To reinforce the desired future character for Minmi and surrounding development;
2. To provide opportunities for choice in housing to cater for a diverse demographic community; and
3. To provide subdivisions that respond to the site's characteristics.

Controls

1. A revised lot layout for the entire Minmi East Precinct shall be provided with the first development application for subdivision of any land and be generally in accordance with the Minmi East Precinct Plan, Indicative Lot Typologies Plan and Conceptual Access and Movement Plan as shown in **Figure 1, 2 and 3**.
2. Lot typology, lot frontage, minimum lot size and depth shall be provided in accordance with **Table 1** and noting Precinct Character Areas as illustrated in **Figure 1** and details provided in Section A.1.8 of the Concept Plan Urban Design Guidelines dated May 2014.
3. Road widths are to be in accordance with Element 7.04 – Movement Networks of Newcastle DCP 2012.
4. Access ways (or laneways) that service the higher density areas are to have a road reserve width of 10 metres (8 metres road pavement).
5. Preferred options for roads and lots on steeper land shall be in accordance with **Figure 4**.
6. Buildings on lots greater than 15% are to employ construction techniques in accordance with **Figure 4** with slope taken at the building location.



LEGEND

- █ Site Boundary
- Existing Creek Line
- APZ - RPS Nov 2010
- - - - Fire Access Trail and Walking Track
- + + + + Existing Historic Railway Corridor

Precinct Character Areas*

- Traditional Housing Character
- Park Side Character
- Lake Side Character
- Hill Side Character
- Creek Side Character
- High Street Character

Open Space

- Neighbourhood Parks
- Drainage Corridors
- Passive Open Space
- Feature Parks
- Detention Basins, Existing & Proposed Lakes

*Note: Character Area boundaries are approximate and subject to detailed survey and design.

Figure 1 – Minmi East Precinct Plan

Further details of the Precinct Character Areas can be found in Section A.1.8 in the Appendix A (Concept Plan Urban Design Guidelines) dated May 2014.



LEGEND

- Site Boundary
- Existing Creek Line
- APZ - RPS Nov 2010
- - - - - Fire Access Trail and Walking Track
- - - - - Existing Historic Railway Corridor

Proposed Allotment Typologies

- Mixed Use Allotment
- Townhouse Allotment
- Small Courtyard Allotment
- Large Courtyard Allotment
- Traditional Allotment
- Lifestyle Allotment

Open Space

- Neighbourhood Parks
- Drainage Corridors
- Passive Open Space
- Feature Parks
- Detention Basins, Existing & Proposed Lakes

Figure 2 – Indicative Lot Typologies Plan



Figure 3 - Conceptual Access and Movement Plan

LEGEND

- ■ ■ ■ Existing Minmi Road
- ← - - - -> Indicative Local Access Road Connections
- ← - - - -> Esplanade Road to Regional Park
- > Potential Local Road Connection to east if required
- Off Road Shared Pedestrian Pathway and Cycleway
- Shared Pedestrian Pathway / Cycleway Along Alignment of Heritage Railway Tracks
- * Potential Pathway Connection to Regional Park

Table 1: Controls for Lot Typology, lot frontage, minimum lot size and depth

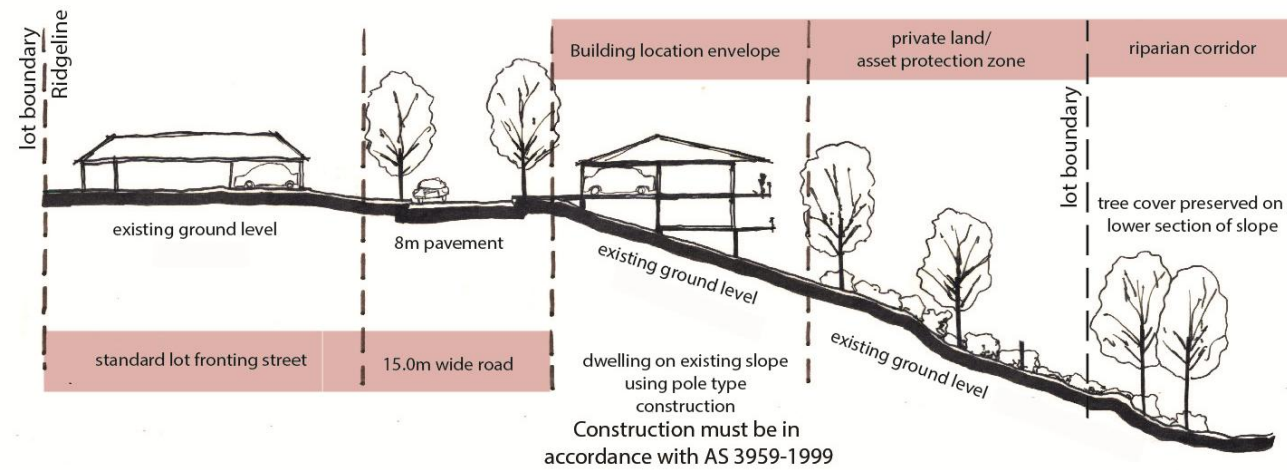
Lot Typology	Frontage Range	Minimum Lot Size	Minimum Lot Depth	Housing	Storeys	Vehicle Access	Site Cover
Townhouse	7m – 10.4m	175m ²	25m	Attached, semi detached, detached	Single or two	Front or rear lane	60%
Small Courtyard	10.5m – 13.5m	262m ²	25m	Detached single dwelling	Single or two	Front or rear lane	60%
Large Courtyard	13.6m – 15.0m	387m ²	28.5m	Detached single dwelling	Single or two	Front	60%
Traditional	15.1m – 17.5m	450m ²	30m	Detached single dwelling	Single or two	Front	50%
Lifestyle Lots	17.6m +	800m ²	30m	Detached single dwelling	Single or two	Front	40%

Note:

1. Allotment frontage is the primary variable to determine an allotments classification for setbacks and building type
2. Where an allotment's depth results in a larger than typical total lot area the frontage will still be the determining factor to classify setbacks and building type
3. To be assessed as a Lifestyle Lot, the allotment must meet both the Minimum Lot Size and Minimum Frontage
4. Battleaxe allotment classification is determined by width. The measurement for the front boundary is to be made at the useable part of the lot.

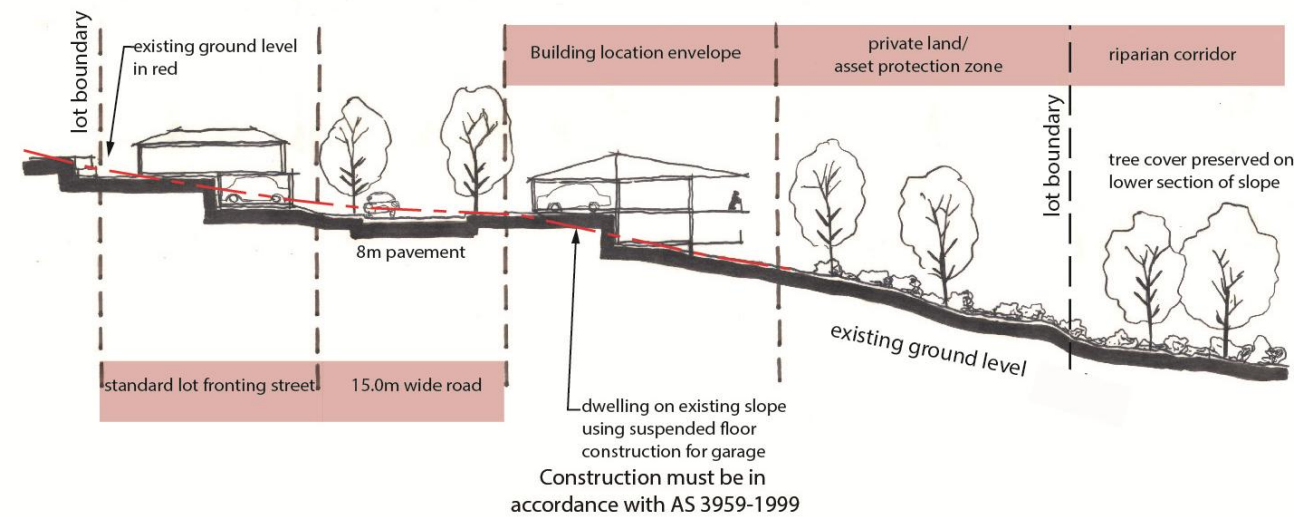
SECTION 1-1

- road constructed above steeper slope.
- bulk earthworks to create streets.
- slope responsive housing constructed level with street.
- homes built with minimal cut/fill within lots.



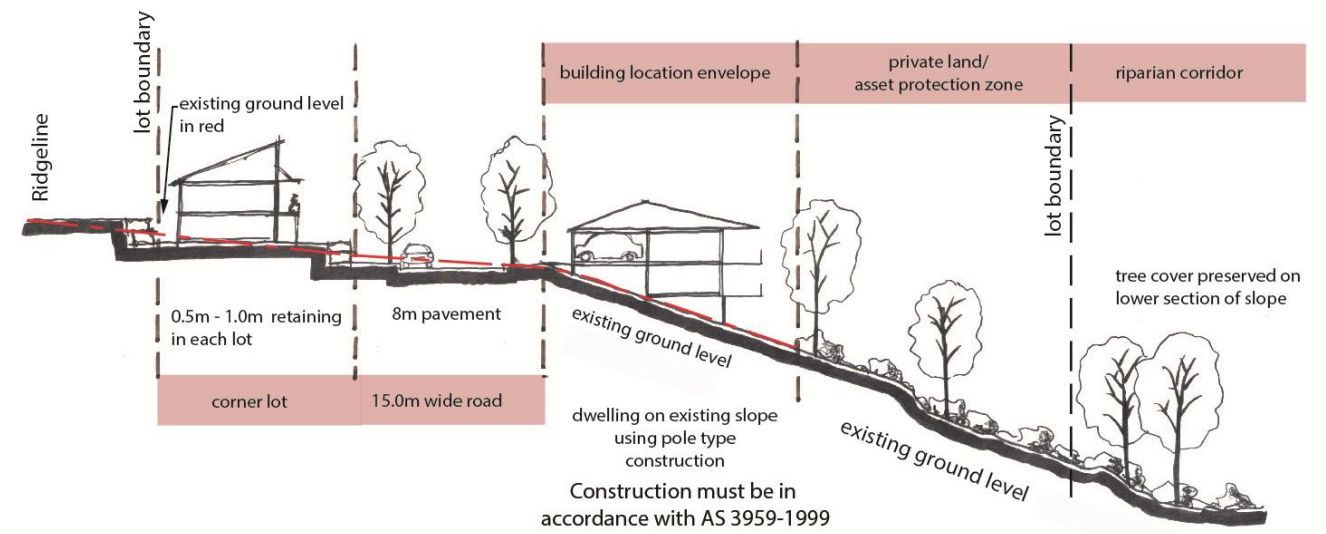
SECTION 3-3

- road cut into side of existing slope.
- bulk earthworks to create streets.
- slope responsive housing on both sides of street. Houses constructed to absorb level change by builder.
- minimal retaining walls as level change contained in house design and construction.
- moderate cut/fill.



SECTION 2-2

- road constructed above steeper slope.
- bulk earthworks to create streets.
- slope responsive housing constructed level with street.
- standard corner lot fronts side street with minor earthworks within each lot by builders, creating retaining between lot boundaries and street frontage.



SECTION 2-2

- road constructed above steeper slope.
- bulk earthworks to create streets and lots.
- lot downslope of street filled and retained within Building Location Envelope

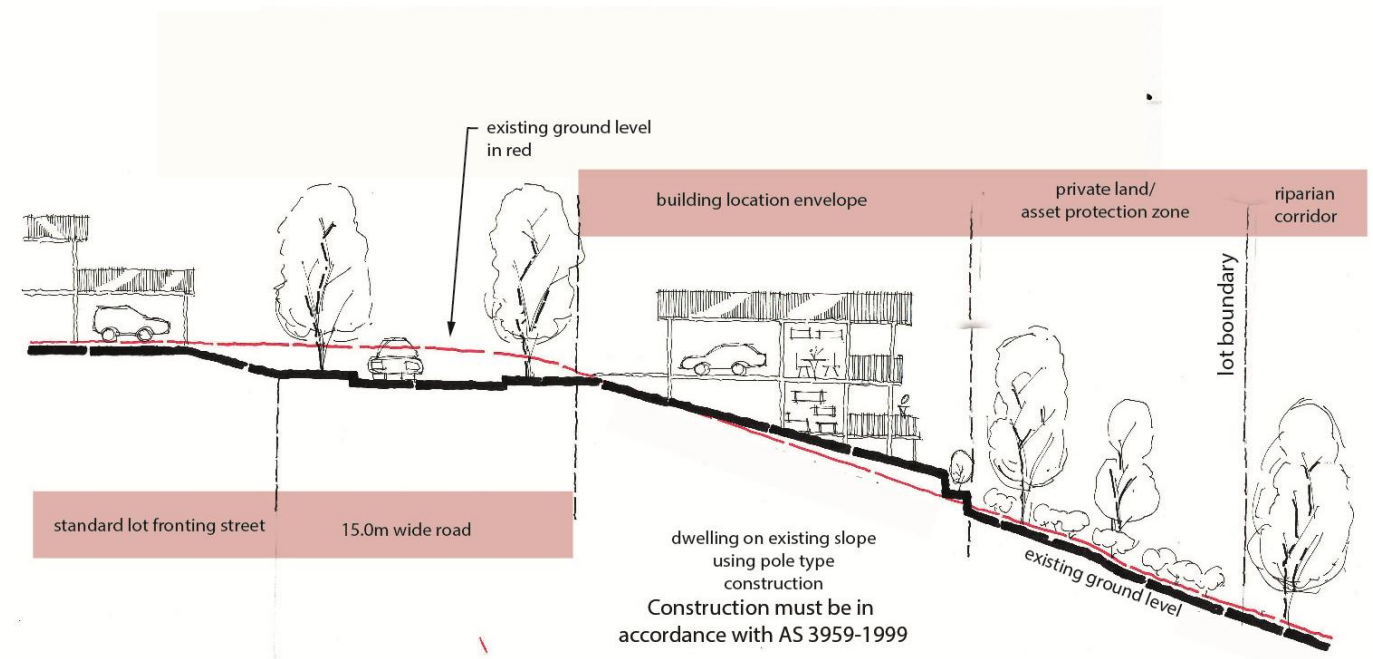


Figure 4 – Preferred options for roads and lots on steeper land

2 Mixed Use Development

A. Site Layout

Objectives

To ensure allotments of appropriate location, size, orientation and shape to accommodate a functional and desirable mixed use development.

Controls

1. Proposals are to clearly define spaces for pedestrians, utilities, service, parking and storage areas and establish links with the public realm;
2. Buildings are orientated towards the primary street including built form on mixed use allotments fronting Minmi Road;
3. Buildings provide covered walkways, outdoor seating and landscaping where possible;
4. Proposals locate the majority of parking, service areas, refuse and mechanical services behind buildings and/or screened from key streets and public open space; and
5. Floor Space Ratio (commercial floor space to site area) is 1.5:1 for all commercial/mixed use areas. Non commercial space is in addition to this ratio.

B. Building Articulation

Objectives

The building facade design should reflect the use type of the building and enhance the pedestrian comfort of the streetscape.

Controls

1. Building facade treatment reflects the activities carried out within the building;
2. Ground floor facades of buildings are articulated and provide interest for pedestrians; and
3. Vehicular entrance openings are integrated within the design of the building.

C. Corner Sites

Objectives

To ensure the corner location of a building addresses both streets.

Controls

1. Buildings incorporate features such as corner entrances, window articulation, built elements and material changes to highlight and reinforce the corner.

D. Building Access

Objectives

To provide identifiable entrances for buildings and land uses within the mixed use development.

Controls

1. Buildings provided a primary entrance to a mixed use development and distinguish it from secondary entrances; and
2. Design entrances of buildings are clearly visible and connect to the street frontage, are well-lit at night and provide clear numbering.

E. Street Interface

Objectives

Mixed use development is to connect to the street activity and provide a pedestrian-friendly environment.

Controls

1. Proposals locate active uses such as shops and cafes at the front of the building;
2. Proposals utilise areas of the public realm, for spill over activities such as outdoor dining;
3. Where possible proposals provide tenancies as small as possible at ground level to generate an area which is welcoming and pedestrian-friendly;
4. Buildings have windows and wall openings at street level which are of a size that respects the human scale; and
5. Buildings incorporate windows, display cases and other elements along side streets.

F. Noise Mitigation

Objectives

To minimise external noise between unlike land uses and allow ventilation inside buildings (in particular apartments).

Controls

1. Noise attenuation for buildings are addressed primarily through the placement of uses and then the design of the built form.

G. On-Site Facilities

Objectives

To provide facilities and efficient, comprehensive services to ensure the comfort of users with minimal impact on adjacent precincts.

Controls

1. Buildings are designed so that residential service areas (e.g. letterboxes, laundry facilities, rubbish bin and clothes drying areas) are separate from non-residential service areas;
2. Proposals demonstrate the management of services/plant/equipment/metering such that the responsibility and cost for the maintenance is clearly defined;
3. Proposals locate loading facilities at the rear of the development and parking for large sites behind buildings or in the basement;
4. Proposals ensure that ground level parking comprise interface landscaping treatment to enhance streetscape and pedestrian environment;
5. Proposals shall consider titling issues and provide community schemes as required for each land use and level of the building; and
6. Parking areas are to take into account multiple uses. In some instances parking between non-residential land use maybe shared.

H. Mixed-use allotments fronting Minmi Road

Objective

Mixed use allotments fronting Minmi Road, highlighted on the Indicative Lot Typologies Plan shown in **Figure 5**, shall have vehicle access from the rear, and not direct from Minmi Road. As indicated in Section A above, the built form must address Minmi Road.



Figure 5 – Mixed Use Allotments shown on Indicative Lot Typologies Plan

Controls

1. Vehicle access to the rear of buildings may be provided as part of an integrated private carparking layout accessed from local roads in the case of a local shopping centre (Refer to example Images 1-4 on the following pages).
2. Vehicle access to the rear of buildings may be provided direct from a public road such as an Access Way or Laneway as indicated in Section 1 or local roads as contained in Element 7.04 – Movement Networks of Newcastle DCP 2012 (Refer to example Images 5-8).



Image 1



Image 2

Images 1 and 2 are examples of Mixed use allotment fronting Minmi Road, with retail on ground and apartments above, in the case of a an integrated mixed use shopping centre.



Image 3



Image 4

Images 3 and 4 are examples of Mixed use allotment with vehicle access at rear as part of a private integrated carparking layout, accessed from local roads, in the case of a local shopping centre.



Image 5



Image 6

Images 5 and 6 are examples of Mixed use smaller allotment fronting Minmi Road, with retail/commercial on ground and apartments above.



Image 7



Image 8

Images 7 and 8 are examples of Mixed use smaller allotment fronting Minmi Road, with rear vehicle access, direct from a public road such as an Access Way or Local Road.

3 General Residential Development

Note: Master Planning for the Minmi East Precinct has identified five (5) lot typologies and dwelling types that respond to the site characteristics and will reinforce future character.

A. Lot typology, lot frontage, minimum lot size and depth and site coverage.

Objectives

1. To reinforce the desired future character for Minmi and surrounding development;
2. To provide choice in housing to cater for a diverse demographic community; and
3. To provide housing that responds to the site's characteristics.

Controls - Lot typology, lot frontage, minimum lot size and depth and site coverage

1. Lot typology, lot frontage, minimum lot size and depth and site coverage shall be provided in accordance with **Table 1** as provided in Section 1 of these Guidelines.
2. Lot typology will be located generally in accordance with **Figure 2** as provided in Section 1 of these Guidelines.

B. Lot Type Intent and Setbacks

Objectives

1. To promote housing types appropriate to the lot size, shape and orientation;
2. To promote a layout that complements existing development in the area;
3. To provide adequate residential amenity within the development
4. To ensure that buildings address the street and promote active street frontages;
5. To ensure that development enhances the visual character of the street;
6. To limit the visual impact of garages on the streetscape;
7. To ensure corner buildings address both street frontages;
8. To ensure privacy for residents and minimise overshadowing.

Note: **Table 1** illustrates the indicative Lot Intent and built form.

Building and Setback Controls, Garage Type / Width Controls

Setbacks, maximum length and height of built to boundary walls, maximum garage types and widths shall be provided in accordance with **Table 2**.

Table 2: Controls for setbacks, maximum length/height of built to boundary walls, garage types, access issues etc

Lot Types	Front Setback		Side Setback						Max Length and Height of Built to Boundary Wall	Rear Setback		Max. Garage Type	Max Garage Width
	Habitable Rooms	Garage	Built to Boundary		Non built to Boundary		Corner Lots – Secondary Street Frontage			Habitable rooms	Garage		
			Ground Floor	First Floor	Ground Floor	First Floor	Ground Floor	First Floor					
Townhouse Frontage Range: 7m – 10.4m	4.5m	5.5m	Both sides for lots 8m wide and less		For recesses and walls setback from boundary a minimum clearance of 0.9m	For recesses and walls setback from boundary a minimum clearance of 1.2m	1.5m	1.5m	As limited by building setbacks and building height controls	Nil to access way or local road		Double garage permitted from rear lane	6.5m to rear lane
			One side only for lots > 8m wide		0.9m	1.2m				3m up to 4.5m high; 6m above 4.5 where not to a rear lane	n/a	Single/tandem garage permitted to primary street	3.2m to a primary street
Small Courtyard Frontage Range: 10.5m – 13.5m	4.5m	5.5m	One side only	1.2m	0.9m	1.2m	2.5m	2.5m	Max. 15m long; Max 3.5m high	Nil to access way or local road		Double garage permitted from rear lane	6.5m to a rear lane
										3m up to 4.5m high; 8m above 4.5m	n/a	Single/tandem permitted for single storey dwelling on lots up to and including 11.5m wide double garage permitted for 2 storey dwelling on lots up to and including 11.5m wide	3.2m for single storey and 6.0m for double storey on lots up to 11.5m wide
												Double garage permitted for lots > 11.5m wide	6.0m or 50% of the frontage, whichever is less
Larger Courtyard Frontage Range: 13.6m – 15.0m	4.5m	5.5m	One side only	1.2m	0.9m	1.2m	2.5m	2.5m	Max. 15m long; Max 3.5m high	Nil to access way or local road		Double	6.5m
										3m up to 4.5m high; 8m above 4.5m	n/a		
Traditional Frontage Range: 15.1m – 17.5m	4.5m	5.5m	Not applicable		0.9m	1.5m	2.5m	2.5m	Not applicable	Nil to access way or local road		Double	6.5m
										3m up to 4.5m high; 8m above 4.5m	n/a		
Lifestyle Lots Frontage Range: 17.6m +	4.5m	5.5m	Not applicable		1.5m for lots up to 20m wide 2.0m for lots > than 2.0m wide	2.0m for lots up to 20m wide 2.5m for lots > than 20m wide	2.5m	2.5m	Not applicable	Nil to access way or local road		Double or triple permitted if Garage Width design controls are met	6.5m or 9.0m where the third garage opening is setback a further 900mm or oriented with door openings perpendicular to the street
										3m up to 4.5m high; 8m above 4.5m	n/a		

1. Setbacks are as per the above table unless otherwise dimensioned on an approved plan by Newcastle City Council
2. Mandatory and Optional Built to Boundary Walls are to be nominated on approved subdivision plans.
3. Where Optional Built to Boundary Walls are not adopted, standard Non Built to Boundary Setbacks will apply.
4. Allotments are to be nominated into the above categories at the time of approval by Newcastle City Council on approved subdivision plans.
5. Garages fronting laneways comply with the Australian Standard for vehicles entering and leaving the garage.
6. Mixed Use development fronting Minmi Road (Large Lot Mixed Use and Small Lot Mixed Use – Refer Section 2, H) and residential lots fronting Minmi Road will have rear vehicle access via an Access Way or Local Road depending upon subdivision layout.

C. Building Height

Objectives

1. To ensure a final housing product that responds to its site, in particular mining constraints;
2. To minimise overshadowing of adjacent lots and private open space;
3. To ensure solar access to principal living areas and to promote energy efficient design.

Controls

Building Heights are to be in accordance with the *Newcastle LEP 2012* and **Figure 6 - Indicative Building Height Map**.

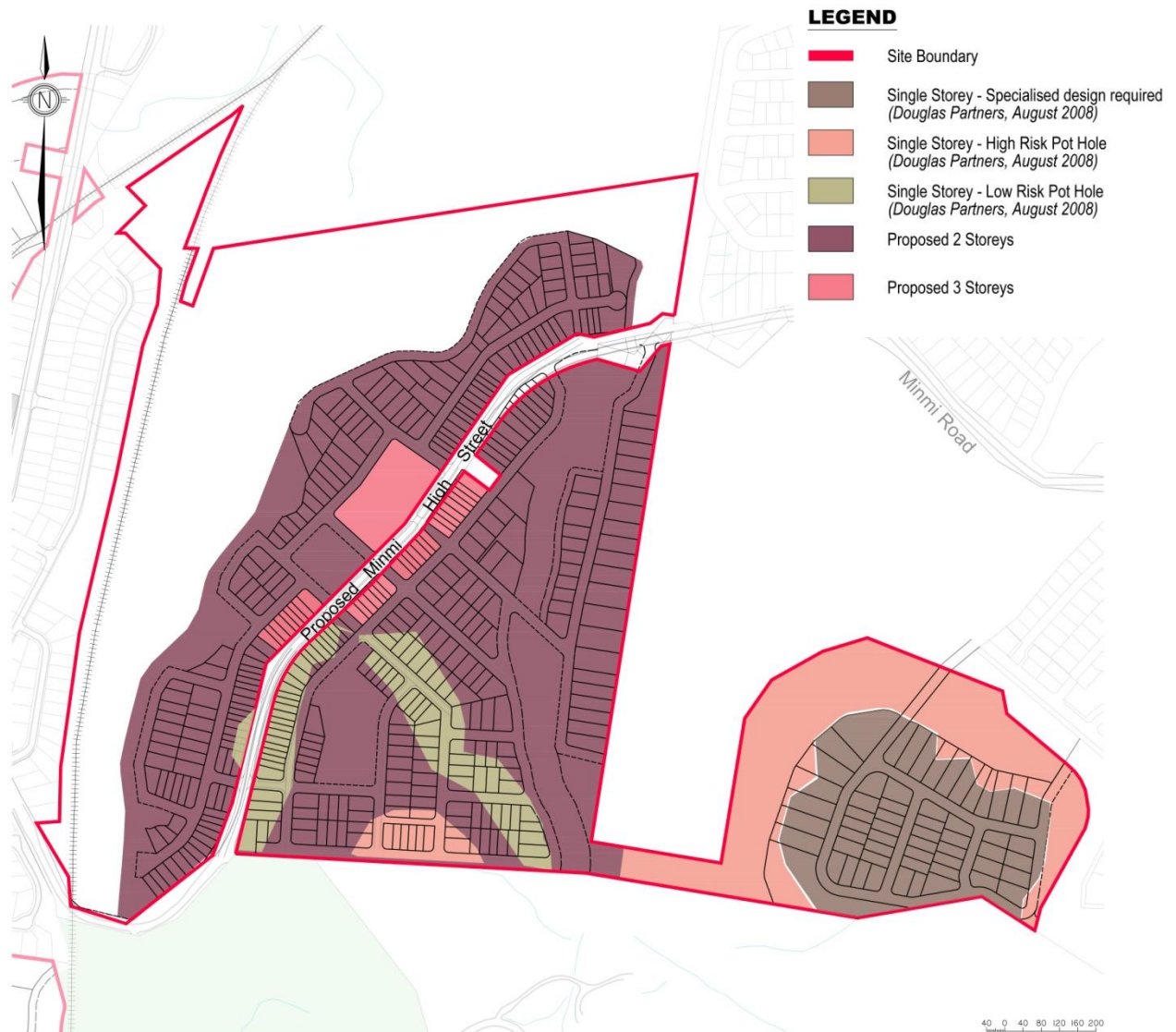


Figure 6 – Indicative Building Height Map

D. Private Open Space and Landscaping

Objectives

1. To promote landscaping on individual lots;
2. To promote an attractive streetscape;
3. To ensure private open space is usable.

Private Open Space Controls

1. Private Open Space is to be in accordance with Element 7.02 Landscape Open Space and Visual Amenity of Newcastle DCP 2012 except for Townhouse and Small Courtyard Lots which shall comply with the following:
 - Townhouse – minimum area of 16m² and a minimum dimension of 3m.
 - Small Courtyard Lot - minimum area of 24m² and a minimum dimension of 4m.
2. Private open space is to be directly accessible from a principal living area;
3. Covered Private Open Spaces such as a patio are to be contained within the nominated side and rear setbacks.

Fencing Controls

1. Front fences and walls are to be no more than 1.2m. This height may be increased to 1.8m where:
 - The development fronts Minmi Road; and
 - The fence has openings which make it not less than 50% transparent.
2. The use of sheet-metal fencing is not permissible to any street boundary, and must not be visible from the street or public space.

Landscaping controls

1. Use of native plant species is encouraged;
2. In established areas, landscaping is to relate to the scale of other elements of the streetscape and the landscape of adjoining development;
3. To the fullest extent possible, appropriate vegetation should be used to provide shade to the northerly and westerly elevations of buildings in summer, while allowing sunlight in winter;
4. The provision of landscaping to the street frontage of new development is to be substantial, enhance the appearance of the development and assist with streetscape integration.

- Where a 4.5m front setback is nominated, the area between the street front boundary and the building line is to be used as a prime deep soil zone for taller tree planting and will not be included as the nominated private open space. If a private open space area is oriented to the street it is integrated with the primary building line setback and roof form.

E. Sloping Sites, Earthworks and Retaining walls

Objectives

- To design housing types that respond to their lot configuration including size, shape, slope and orientation;
- To encourage the design of dwellings to conform to the natural land form;
- To minimise cut and fill and reduce the need for retaining walls.

Controls

- Retaining walls and heights must not exceed those nominated in **Table 3**:

Table 3: Controls for retaining walls and heights

		Townhouse	Small Courtyard	Large Courtyard	Traditional and Lifestyle
Front Boundary	Max. cut height in metres	0.5	1.25	1.4	1.5
	Max. fill height in metres	1.0	1.0	1.0	1.0
Side Boundary	Max. cut height in metres	0.5	0.7	0.7	1.0
	Max. fill height in metres	0.5	0.7	0.7	1.0
Rear Boundary	Max. cut height in metres	1.5	1.5	1.5	2.0
	Max. fill height in metres	1.0	1.0	1.0	2.0

Note:

- In some situations of cut, retaining walls may exceed those nominated for parts of the retaining wall. In these cases the retaining wall must not exceed an absolute maximum of 1.8m at one point only and must average heights indicated in the above table.
- For Traditional and Lifestyle Lots, rear boundary cut and fill heights are increased to 2m due to housing on slope issues as contained in Section B.1.3.3 of the Coal and Allied Northern Estates Minmi – Link Road Urban Design Guidelines, (Appendix B dated January 2014).

- On sloping sites, if the controls in **Table 3** are unable to be achieved then construction methods other than slab on ground are to be used such as pole homes, suspended slabs and reduced building pads to minimise cut and fill. If elevated construction is used then underfloor services must be screened, however as noted in **Figure 4**, all construction must be in accordance with AS 3959-1999;

3. Slope is taken at the building location;
4. Retaining walls are to be located fully within the boundaries of the subject property;
and
5. Retaining walls forward of the building line to any street, park or lane front or visible from any public realm cannot exceed 1.0m in height. All other retaining walls cannot exceed 1.8m in height without stepping elements incorporated. Retaining walls must be constructed in natural materials and colours

F. Asset Protection Zones

Objectives

1. Development shall be consistent with the requirements of *Planning for Bushfire Protection 2006*;
2. The management of existing vegetation within Asset Management Zones (APZs) involves both selective fuel reduction (removal, thinning and pruning) and the retention of vegetation. Valuable native trees and shrubs should be retained as clumps or islands;
3. Perimeter roads are to be designed for any future residential development. A perimeter road forms part of the APZ and will provide a separation between the building and the boundary of the bush fire hazard; and
4. Fire trails may function as a strategic control line around the hazard side of the Inner Protection Area, if they are connected to the public road system at frequent intervals. A fire trail is not a substitute for a perimeter road and any proposals will need to demonstrate clear benefits over the use of a perimeter road.

Controls

1. Lots must comply with the APZs as determined during the DA process;
2. Vegetation that can be retained as clumps or islands without compromising the effectiveness of APZs is to be identified within applications for subdivision;
3. Any perimeter road should be fully sealed and have a minimum road reserve width of 8m minimum kerb to kerb, with the following design specifications;
 - Roads should be two wheel drive, all weather roads;
 - Roads should be two-way: i.e. at least two traffic lane widths with shoulders on each side, allowing traffic to pass in opposite directions;

- Roads should be through roads where possible, any dead end roads should not be more than 200m in length with a 12m radius turning circle and clearly sign posted as such;
 - The capacity of road surfaces and bridges should be sufficient to carry fully loaded fire fighting vehicles (approximately 28 tonnes or 8 tonnes per axle); and
 - Roads should be clearly sign posted and buildings clearly numbered.
4. The width and design of fire trails shall enable safe and ready access for fire fighting vehicles; and
 5. Fire trails are to be trafficable under all weather conditions. Where the fire trail joins a public road, access shall be controlled to prevent use by non authorised persons.