

Magnolia
HARRINGTON GROVE

BUILDING CONTROLS AND GUIDELINES




HARRINGTON GROVE

IDYLLIC SURROUNDINGS. BEAUTIFUL HOMES.
THIS IS HARRINGTON GROVE.



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HARRINGTON GROVE



WELCOME TO HARRINGTON GROVE

Build your private estate in Harrington Grove and find yourself surrounded by kilometres of natural forests, woodlands and waterways. Access the exclusive modern luxuries of the Country Club and its many recreation and social facilities.

Harrington Grove has been in the planning for over a decade. With meticulous care, it has been crafted with the natural and unique features of the land in readiness for its new residents. Beautiful native woodlands have been extensively regenerated, riparian areas carefully revegetated and waterways aesthetically and functionally enhanced. At the heart of Harrington Grove is the Country Club comprising a comprehensively equipped fitness centre, four tennis courts, a 25 metre swimming pool, a restaurant, modern function rooms and a naturally carved outdoor amphitheatre.

With the same thought and attention to detail, these building guidelines have been put together to help you plan your family home. The aim is to ensure that all homes in Harrington Grove are built to a fitting standard, complementing the overall estate and contributing to the creation of attractive streetscapes.

Harrington Grove is an investment not only in your future, but the future of your family and the generations to come.





YOUR HOME AT HARRINGTON GROVE

We understand that your family home is one of the greatest personal investments that you will make in your life. Harrington Grove has been planned to blend with the natural environment and be a haven from the hustle and bustle. Now you can maximise the enjoyment of your home with a design that suits your family.

These building guidelines have been designed to enhance and protect the value of your home in Harrington Grove. It is important that you discuss these with your home builder or architect during the early stages of planning for your home.

Harrington Estates (NSW) Pty Ltd, the developers of Harrington Grove, is committed to encouraging and showcasing good urban design and ecologically sustainable urban residential development.

All homes are required to comply with the provisions of these guidelines and home designs must be submitted to Harrington Estates for approval prior to construction.

These building guidelines detail the mandatory building controls that apply to homes within Harrington Grove, as well as providing information and guidelines to further enhance the design of your home. Our objective is to create a pleasant living environment that is focused on a strong sense of community, and provide a variety of home types to suit the diverse community.

Suggestions on the form, scale and siting of your home are included, along with a range of options in materials and colours intended to guide your choices while reflecting your unique tastes and preferences.

In developing these building guidelines, Harrington Estates is aware that occasionally some home designs will satisfy the objectives of good design whilst not strictly complying with the guidelines. In recognition of this, Harrington Estates reserves the right to modify the guidelines for a particular home. It is anticipated that this would be a rare occurrence, and then only with the agreement of Camden Council and, if appropriate, the adjoining and nearby residents.

Conversely, if appropriate, Harrington Estates reserve the right to refuse a design that, in their opinion, is of poor design and does not satisfy the objectives, even though it may comply with all the guidelines.



1.0 BUILDING APPROVAL PROCESS

The building plans for your home, prepared by your home builder or architect, must be submitted to Harrington Estates who will assess the plans for compliance with these guidelines.

After the plans are approved by Harrington Estates, they must then be submitted to Camden Council or an accredited certifier who will assess the plans for compliance with Council's building requirements.

The building plans submitted to Harrington Estates are required to include the following information:

- A site analysis plan showing:
 - a) Physical characteristics for the homesite such as slope, drainage, levels, services, etc;
 - b) Site context such as views and orientation;
 - c) Overshadowing caused by existing trees or buildings on or adjacent to the site;
 - d) Direction of prevailing winds.
- A site plan drawn to scale showing:
 - a) Dimensions and areas of the proposed home;
 - b) Setbacks to all boundaries;
 - c) Original and proposed finished ground levels;
 - d) North point and all homesite boundaries;
 - e) Driveways, parking areas and all paved areas;
 - f) The location, extent and details of construction materials for all fences;
 - g) Details of all landscaping showing the extent of all soft and hard landscaping, along with details of materials and plants;
 - h) Dimensions of private open space areas.
- A floor plan for each storey.
- An elevation for each side of the home.
- Shadow diagrams for all two storey homes and some single storey designs on the 21st June for 9am, noon and 3pm (taken 1m above the ground).
- Any fencing details not shown on the site plan.
- Details on the materials and colour of all external building materials.
- BASIX certificate.
- The builder must acknowledge that the home must be smart wired in accordance with the standards outlined by the National Broadband Network on all plans.

Harrington Estates will endeavour to assess your plans within 5 working days from when they are submitted.





2.0 BUILDING CONTROLS

Whilst encouraging variety in housing design, these Building Guidelines promote characteristics of good design such as:

- Façades that are attractive with adequate relief to provide interest.
- Façades that are 'welcoming' and do not dominate the streetscape.
- Rooflines that are aesthetically pleasing and incorporate adequate eaves.
- Street elevations that are not dominated by garage doors.
- The provision of adequate solar access.
- Energy efficiency through passive solar design.
- High levels of amenity (daylight, outlook, privacy) from within the home and the private open space.
- The use of appropriate colours that complement the natural setting.



2.1 SITE PLANNING

It is very important to plan the siting of your home on your homesite. Good siting will enhance your use and enjoyment of your home. It helps protect your views and privacy, maximises solar access and takes account of the physical characteristics of your homesite.

You should discuss the siting of your home with your home builder and/or architect. You are also welcome to obtain information and advice from Harrington Estates.

2.2 BUILDING AREA AND SITE COVERAGE

The minimum floor area of homes is 300m² including garage areas and alfresco dining areas under the main roof line.

A reduction of up to 50m² will be permitted providing that the architectural merit and streetscape appeal are considered to be satisfactory and that the following minimum widths are met:

- Single storey dwelling - minimum width 15m.
- Two storey dwelling - minimum width 12m with double garage.

The ground floor area of the home, including detached buildings, must be no greater than 50% of the area of the homesite. This area excludes the area of access legs of battle-axe homesites.

Open verandahs and covered outdoor entertaining areas with perimeter walling no higher than 1m are excluded. Garden sheds that comply with Camden Council's exempt or complying development policy are also excluded.

2.3 SLOPING SITES

On sloping land, the height and bulk of buildings are to be minimised and the need for cut and fill reduced by home designs that allow the building mass to step down the slope. The use of bearer and joist home construction and split level home designs are encouraged to minimise site disturbance.

CUT AND FILL

For cut and fill requirements, please refer to Camden Council requirements under DCP 2011 or Private Certifiers requirements under the Complying Development requirements in the NSW Housing Code.

2.4 CORNER HOMESITES

Homes on corner homesites must address both streets. The requirements for street elevations in section 2.5 apply to both street elevations. Further information and advice on addressing streets can be obtained from Harrington Estates.

2.5 STREET ELEVATIONS

In order to achieve attractive streetscapes, it is important that your home, and those of your neighbours, are designed to present attractive elevations to the fronting streets. Homes need to address the street. In the case of corner homesites, homes need to address both streets.

Homes cannot have a form that is bulky and uninteresting. Interesting building form is to be provided by the use of articulation of the roof, and the use of architectural details such as verandahs, canopies, balconies, porches and chimneys. Individual building elements such as entry porticos, verandahs and balconies must have suitable proportions.

Street elevations must incorporate at least three of the following design features:

- a) Entry feature or portico;
- b) Awnings or other architectural features over windows;
- c) Balcony or window box treatment to any first floor element;
- d) Recessing or projecting architectural elements;
- e) Open verandahs;
- f) Bay windows or similar features; or
- g) Balcony or similar feature above garage doors.

Street elevations must present articulated roofing and an interesting, articulated façade. Refer to Figure 2.5.1.

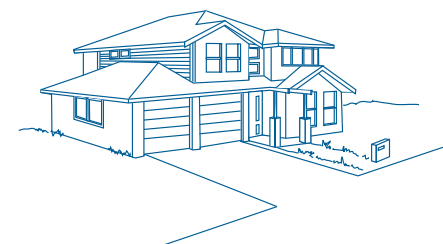
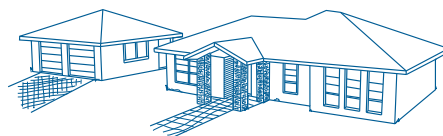
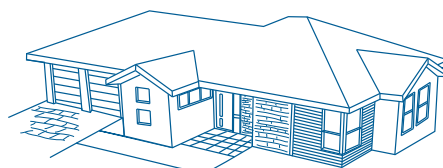


Figure 2.5.1. Examples of satisfactory façades

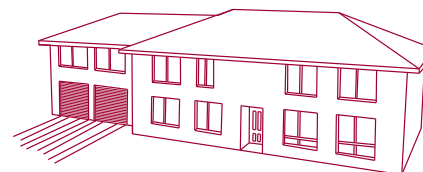


Figure 2.5.2. Examples of unsatisfactory façades



2.6 STREET FAÇADES

To ensure that homes and façades have an attractive streetscape, there are two objectives:

Firstly to prevent garages dominating the streetscape and secondly to enable sufficient articulation in the façade such that houses don't dominate the street. To achieve this the following provisions apply.

- Garages are to be set back in accordance with the requirements of clause 2.10 Garages
- Part of the front façade (excluding the garage) must be set back a minimum of 900mm from the rest of the façade (excluding the garage). This results in a staggered or articulated façade. Recessed or protruding entry alcoves, central to the front building façade and containing the front door, do not, alone, satisfy this requirement.
- On corner homesites, no straight section of the side wall facing a street is to be longer than 9m or shorter than 2.5m. Walls longer than 9m are to have a 'step' of at least 900mm between the sections. Refer to Figure 2.6.1.

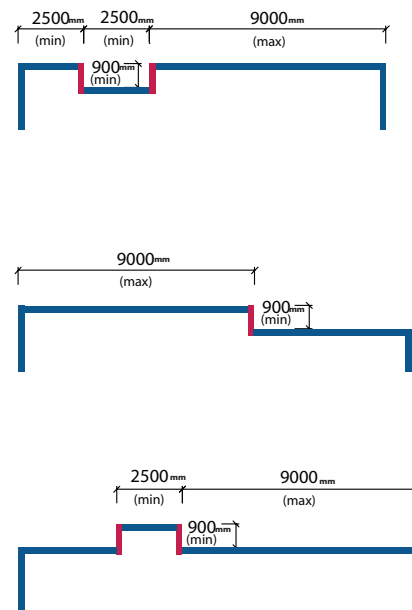


Figure 2.6.1. Examples of side walls facing street

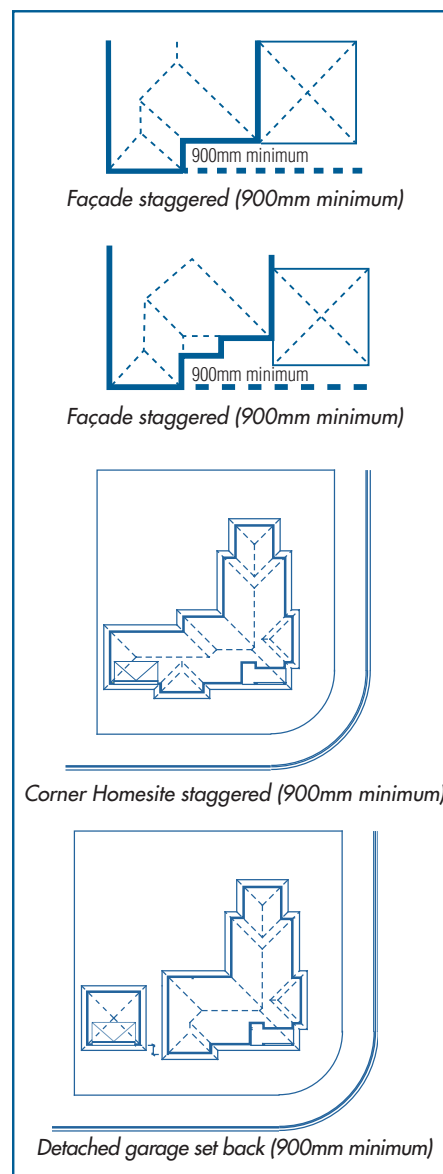


Figure 2.6.2. Façades - acceptable

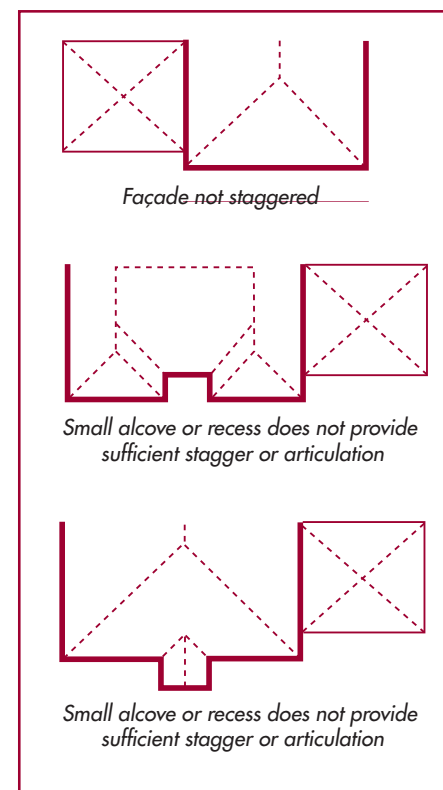


Figure 2.6.3. Façades - not acceptable

2.7 SETBACKS

All homes and associated structures are to be set back from the homesite boundaries in accordance with the requirements of this section.

- Minimum setbacks are shown on Figure 2.7.1, 2.7.2 and 2.7.3.
- Separate structures, such as garden sheds larger than 10m², must also comply with these setback requirements.

Front Setbacks

- Front setbacks apply to front boundaries. These are boundaries between the homesites and the adjacent roads. Corner homesites typically have two front boundaries and the setback requirements apply to both boundaries. Other homesites typically have one front boundary. The front boundaries of all homesites are shown in Figure 2.7.3.
- Minimum front setbacks are 4m for corner homesites and 6m for most other homesites as detailed in Figure 2.7.3.
- Setback requirements apply to garages also, as detailed below:
 - Where the minimum front setback is 4m, garages must be setback at least 5.5m.
 - Where the minimum front setback is 6m, garages must be setback at least 6.9m.
- Please note that the building form requirements may result in the garages needing to be set back further than these minimum setbacks.

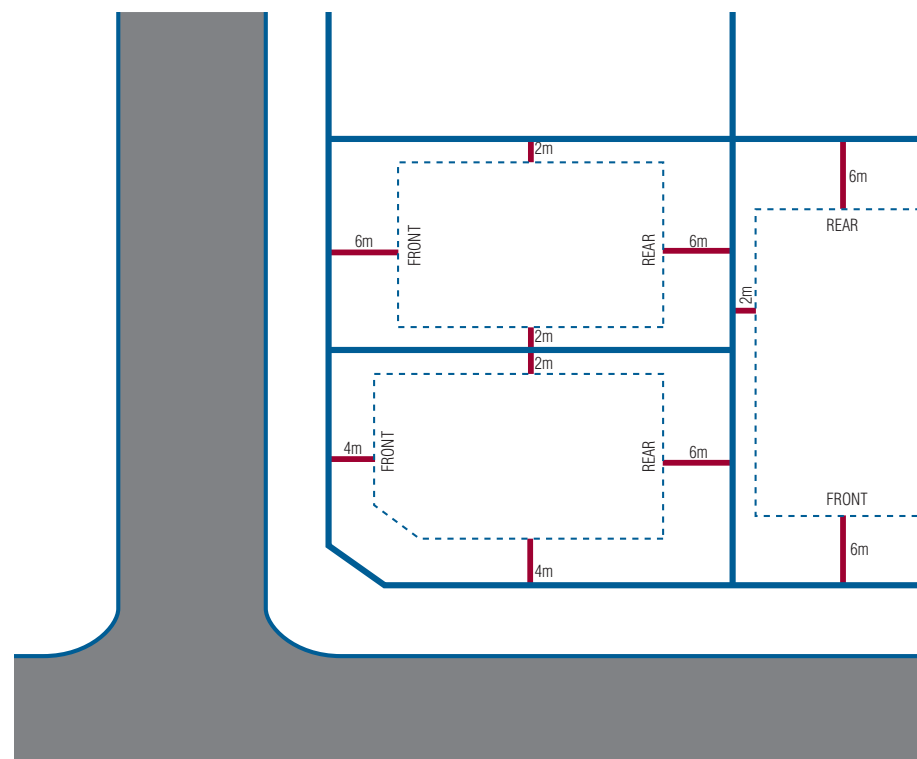


Figure 2.7.1. Typical minimum building setbacks



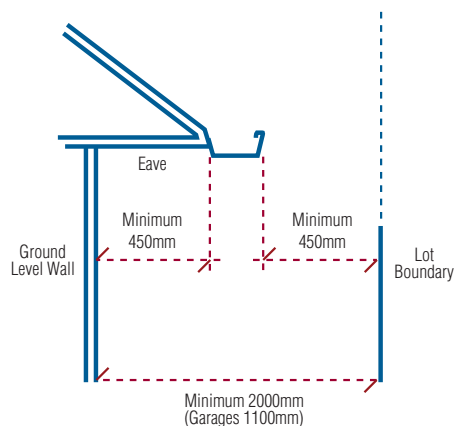


Figure 2.7.2. Side boundary setbacks

Side Setbacks

- Side setbacks apply to the side boundaries of homesites as shown in Figure 2.7.3.
- The minimum side setback for all side boundaries is 2m, for lots more than 800m². For lots less than 800m², the required setback is 1.5m for single storey homes and 2m for two storey homes.
- A reduced minimum setback of 1.1m applies to garages.
- These setbacks relate to the side walls of the home or garage. Eaves, fascias, downpipes, chimneys and gutters can be closer to the side boundary, providing that there is a minimum separation of 450mm from the boundary, as shown in Figure 2.7.2.

Rear Setbacks

- Rear setbacks apply to the rear boundaries of homesites as shown on Figure 2.7.3.
- The minimum setback from all rear boundaries is 6m.

Corner Homesites

- The rear and side setbacks of corner homesites are shown on Figure 2.7.3. These may be reversed to respond to the orientation and design of the home.

Garages

Setbacks relating to garages are detailed in clause 2.10.

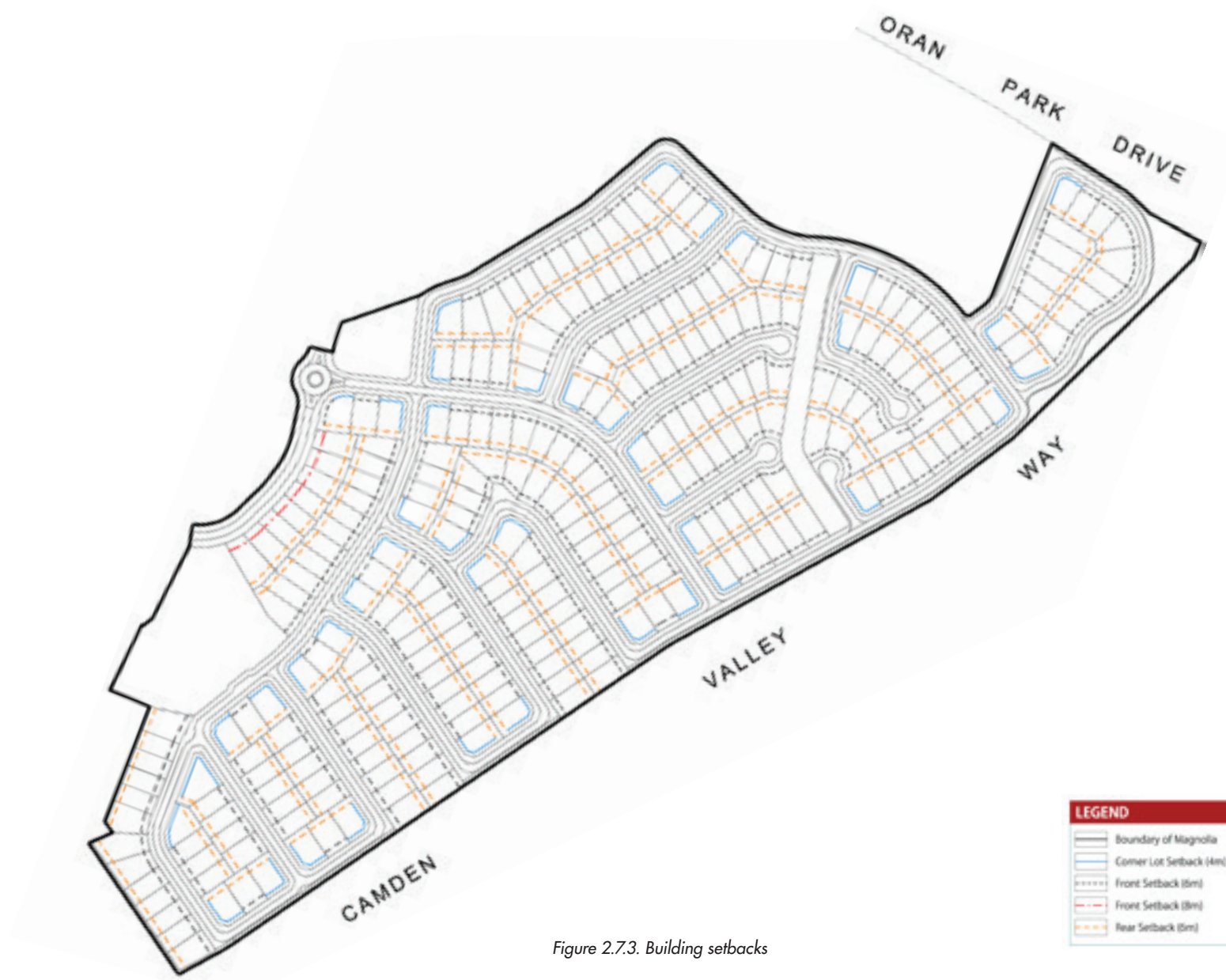


Figure 2.7.3. Building setbacks



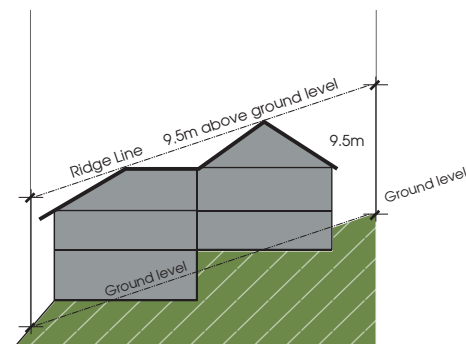


Figure 2.8.1. Building height guide

2.8 BUILDING HEIGHT

To control the bulk and scale of buildings, all homes are limited to a maximum height of 9.5 metres measured from the natural ground level of the residential homesite to the top of the ridgeline at the point beneath the wall.

Homes are limited to a maximum of two storeys. A storey is defined as a space within a building that is situated between one floor level and the next floor level above, or, if there is no floor level above, the ceiling or roof above. This definition does not include an attic, mezzanine or loft.

2.9 LOFTS

Lofts are intended to provide flexibility in the design and location of floor space within a home, but are not intended to be an additional storey.

- Lofts are to be contained entirely within the roof pitch.
- Lofts may be used as habitable areas.

2.10 GARAGES

Garages can be a dominant feature of a home on the streetscape, and the following standards control the provision of garages:

- Each home must have a double garage as a minimum.
- Double car garages are to have internal dimensions of at least 5.5m in width and 5.5m in length.
- Dimensions are to be clear of fixed internal structures such as stair cases. Refer to Figure 2.10.1.
- Garages must be located 900mm behind the primary building façade closest to the road to which the garage doors face and be setback at least 5.5m from the homesites boundary with the road reserve.

Often the garage must be set back more than this in order for the home to comply with the front setback and street façade provisions. Refer to clauses 2.6 and 2.7.

- Triple garages must have at least one garage setback at least 900mm behind the other garages
- The side wall of garages set back less than 2m are to be no longer than 9m.
- Garages may be detached from the home.
- Garage doors are to be tiltup, panel or sectional. Roller doors are not permitted on the front of the garage.

- The width of the garage doors when viewed from the street must not exceed 50% of the width of the home.
- Garages must be constructed using the same materials as the home. The appearance of the garage must be consistent with the home in respect of materials, colours and roof pitch.
- Garages may be considered forward of the front of the living area of the home providing such garages are accessed from the side and the facade fronting the street resembles a dwelling facade which includes windows and similar architectural features. (Refer to figure 2.10.2)
- If the home is 2 storey then the garage must have a 2 storey component to it. Standard building setbacks as outlined in 2.7 Setbacks apply. In either case the garage must be integrated with main dwelling.
- Garages are to be setback at least 1.1m from any side or rear boundary on a corner lot.

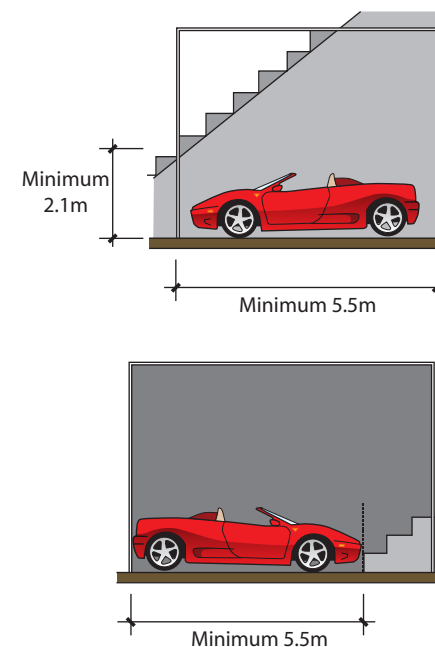


Figure 2.10.1. Garage dimension guides

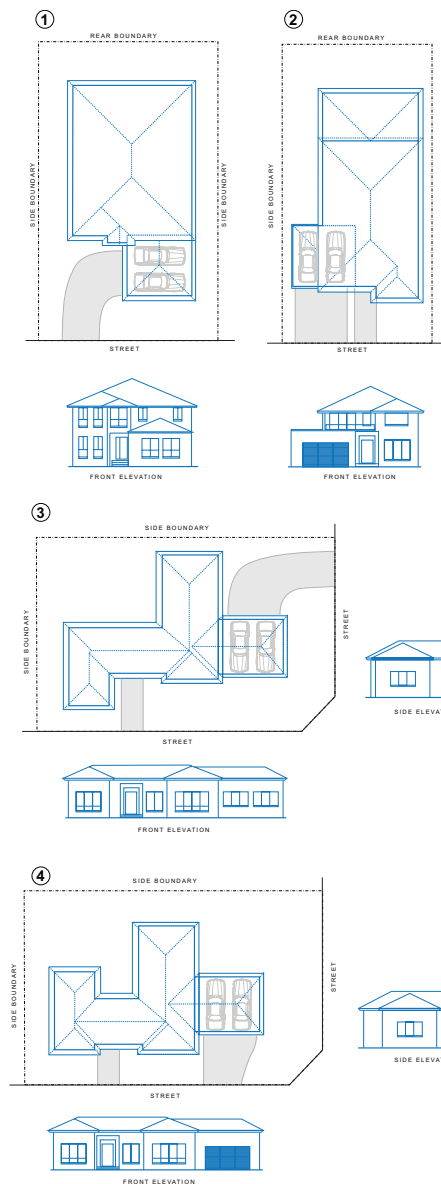


Figure 2.10.2. Garage guide

2.11 ROOFS

Roofs are to be constructed of pre-painted steel, tiles or slate, and consist of a single colour and material. Highly reflective materials, such as uncoated zincalume, are not permitted.

Acceptable and unacceptable roof colours are shown in figure 2.12. Please note that the same rules also apply for similar colours.

A colour schedule containing samples of roof colour is to be shown on the building plans submitted for approval.

Roof Pitch

The roof pitch should be a minimum of 22.5° and a maximum of 45°. Skillion roofs with a minimum slope of 22.5° will also be approved. Variations to the minimum roof pitch requirement can be considered where architectural merit and innovation in the building design is demonstrated.

Eaves no smaller than 450mm are to be incorporated into the building design and are required on all front and side façades.

The roof line should be articulated to follow the home façade where the step within the façade exceeds 2.5m in length and fronts a road or public reserve, i.e. corner homesites and street front. Refer to Figure 2.11.1.

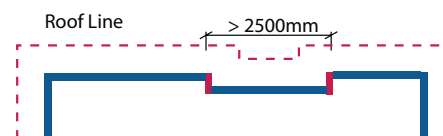


Figure 2.11.1. Roof line

Acceptable Monier Tile Roof Colours*

Caper®

Barramundi®

Sambuca®

MochaChoc®

**Roof tile colours shown are from the Monier range. Similar roof tile colours will also be approved from other tile ranges.*

Unacceptable Colorbond® Roof Colours

Surfmist®

Acceptable Colorbond® Roof Colours

Jasper®

Dune®

Windspray®

Woodland Grey®

Cove®

Pale Eucalypt®

Mangrove®

Cottage Green®

Terrain®

Shale Grey®

Deep Ocean®

Ironstone®

Monument®

Figure 2.12. Roof tile colours guide



2.12 BUILDING MATERIALS

External walls of all homes should be constructed from the following materials in colours that reflect the natural environment:

- Face or rendered brickwork,
- Stone,
- Rendered concrete blocks,
- Glass, or
- Lightweight materials such as fibre cement or seamless, textured and coated materials.

The use of lightweight materials is only permitted on upper storey walls, and is to be constructed of fibre cement or other seamless, textured and coated materials.

Samples or photos of face bricks and samples of colours of painted rendered external walls are to be submitted with the building plans for approval.

2.13 DRIVEWAYS

- Driveways must be constructed from the garage to the road kerb prior to occupation of the home.
- Between the kerb and the boundary of the homesites the driveway is to be a consistent width between 3m and 5.5m.
- Driveway must be constructed to its full width. Driveways must be constructed of:
 - stencilled coloured concrete
 - stamped coloured concrete
 - plain finishes coloured concrete
 - clay pavers
 - interlocking concrete pavers

Colours of driveways are to be nominated on the landscape plan.

Note: plain uncoloured concrete is not permitted.

- Driveways are to be sufficiently set back from side boundaries to allow effective screen planting along the boundary.
- The average grade of driveways measured from the boundary of the homesites to the garage is not to exceed 1:6.
- Driveways are to be at least 500mm clear of all drainage structures in the kerb and gutter and at least 500mm clear of fences.
- Driveways to corner homesites must be located at least 6m from the end of the curve in the kerb as shown in Figure 2.13.1.

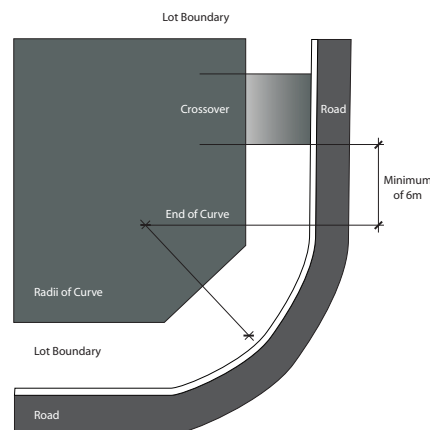


Figure 2.13.1. Corner homesite driveways

- Driveways are not permitted in some locations. These locations are shown on Figure 3.6.



2.14 PRIVATE OPEN SPACE

- Each home must have private open space behind the front building line.
- The total area of private open space must be at least 80m² for homes with three or less bedrooms and 100m² for homes with four or more bedrooms.
- Each home must be designed so that sunlight reaches at least 50% of the principal private open space for not less than 3 hours between 9am and 3pm on 21st June.
- Each home must have at least one principal private open space directly connected to a living zone (i.e., lounge room, family room, dining room.) This space must have dimensions of at least 5m x 5m and must not have a gradient steeper than 1:15. Refer to Figure 2.14.1.
- On homesites steeper than 1:15, the private open space may be terraced or provided on a suspended deck with minimum dimensions of 4m x 2.5m.



Figure 2.14.1. Example of private open space



2.15 SPECIAL PROVISIONS

Some homesites in this precinct require specific building controls because of their particular location and attributes. These homesites are identified in Figure 2.15.1. Where these provisions conflict with provisions in other sections, then to the extent of any conflict, the special provisions are to apply.

(i) Visually Prominent Homesites

Some homesites are more visually prominent because they are located within view corridors. The following provisions apply to these homesites:

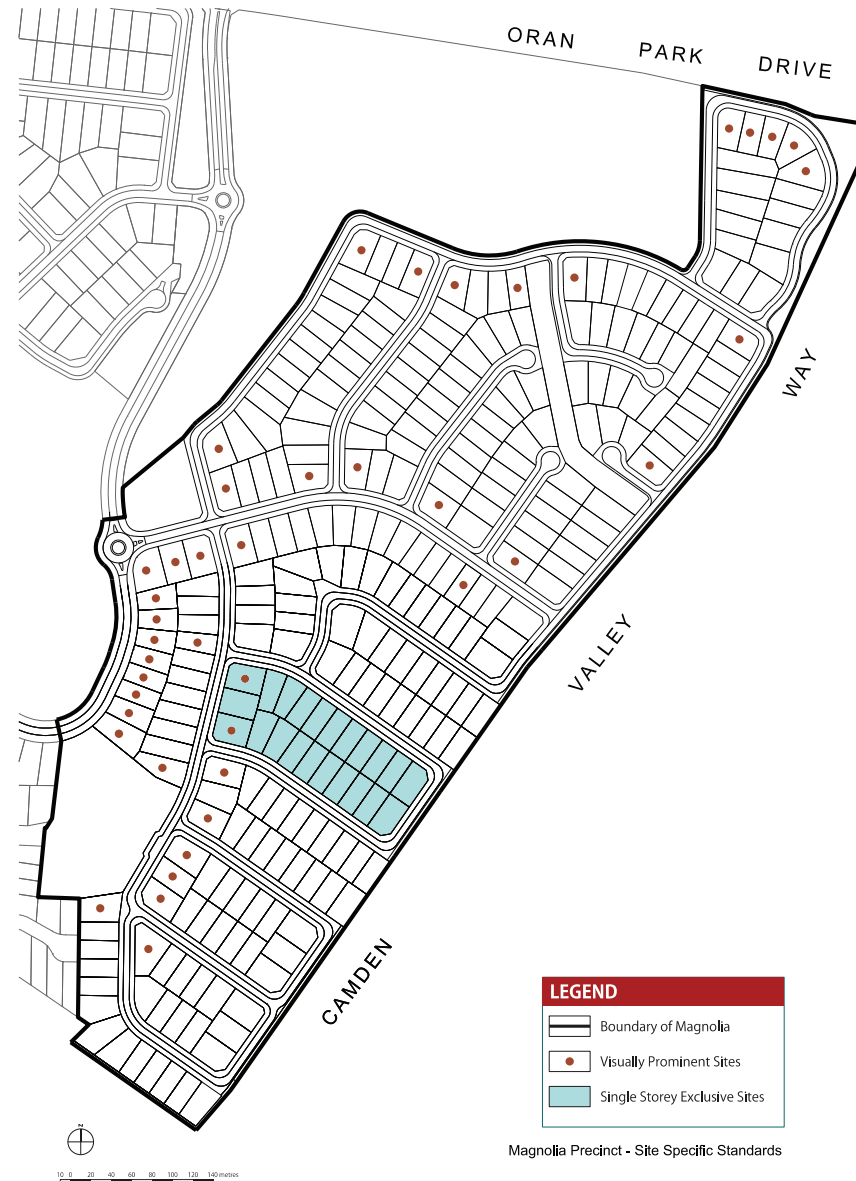
- Total floor area of the homes is to be at least 300m² including garage areas and alfresco dining areas under the main roof line in accordance with clause 2.2.
- Homes on corner homesites are to address both street facades. Advice on how this is achieved can be obtained from Harrington Estates.
- Driveways to these homesites are to be located in accordance with clause 2.13
- Fencing to these homesites are to be designed and constructed in accordance with clause 2.16.

(ii) Single storey exclusive block

These homesites are identified in Figure 2.15.1

- All homesites within this block are restricted to single storey homes. Two storey homes are not permitted.

Figure 2.15.1. Special provisions



2.16 FENCING

Fencing within Harrington Grove should be designed to reinforce property boundaries and provide security and privacy without dominating the streetscapes or natural landscapes. The materials and colours of fences should complement the home and must comply with the following provisions.

(i) Estate Fencing

Some fences that abut roads or parks and are visually prominent will be provided by Harrington Estates as part of the development works. These fences, designated 'estate fences' are shown on Figure 2.16.1.

The following provisions apply to these fences:

- These fences will be provided at Harrington Estates' cost.
- The design of the fences will be at Harrington Estates' discretion.
- These fences cannot be altered, removed or replaced without approval from Harrington Estates.
- Information on design of these fences can be obtained from Harrington Estates.
- Internal fencing that is parallel to and located behind the estate fencing, such that the appearance of the estate fence is altered, is not permitted.

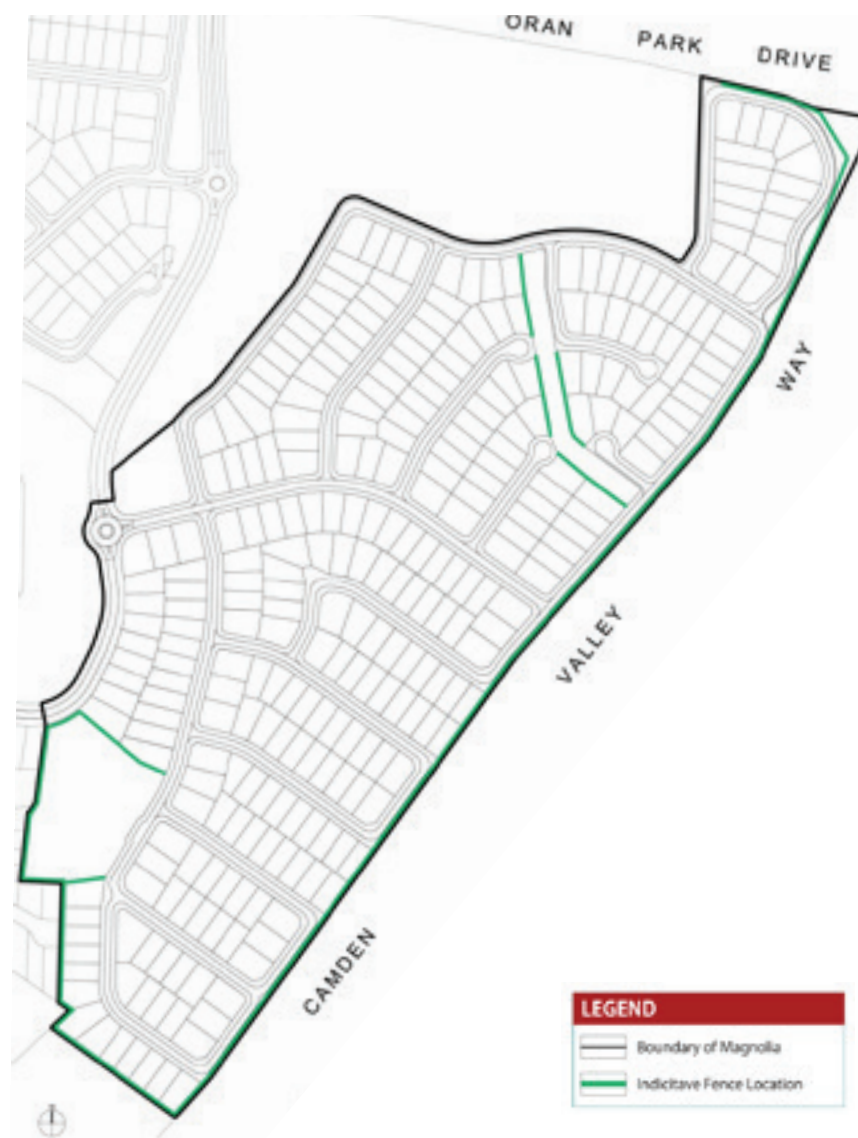


Figure 2.16.1. Estate fencing



(ii) Front Fencing

Fencing along the front boundary is permitted, providing that it complies with the following provisions:

- Fencing along the front boundary is limited to a maximum height of 1m from finished ground level, including cases where front fencing is located on top of a retaining wall. Piers with a maximum dimension of 500mm x 500mm are permitted to a maximum height of 1200mm and a maximum distance between piers of 4 metres.
- Where the fence is located on top of a retaining wall, the total height of the fence and wall, measured from the finished ground level on the verge side, is not to exceed 1m.
- Details of the fence, including proposed design, materials and colours are to be submitted for approval with the building plans.
- Fencing is to be constructed of face brick, rendered brick or rendered blockwork piers with visually permeable infill panels of landscaping, decorative steel, wrought iron or timber pickets. Panels are to be at least 70% visually permeable. Fences constructed entirely of timber pickets, palings or materials of similar appearance are not permitted. Refer to Figures 2.16.2, 2.16.3 and 2.16.4.



Figure 2.16.2. Front fencing with infill panels



Figure 2.16.3. Face brick piers with picket



Figure 2.16.4. Rendered brick with decorative steel

(iii) Side and Rear Fencing between Homesites

Fencing on common boundaries between homesites must comply with these provisions:

- Fencing on side boundaries is limited to:
 - a) 1m in height from the front boundary to 1m behind the front building façade closest to the side boundary, and
 - b) 1.8m in height from 1m behind the front building façade closest to the side boundary. Refer to Figure 2.16.5.
- Fencing on rear boundaries behind the building alignment is limited to 1.8m in height.
- Fencing along the side and rear common homesite boundaries is to be constructed:
 - a) of pre-painted sheet steel fencing or masonry materials where a fence height limit of 1.8m is permitted, and
 - b) in accordance with the front fencing requirements where a fence height limit of 1m is permitted. Refer to section 2.16 (ii).
- For side or rear fencing on corner homesites, refer to section 2.16 (iv).
- The colour of common homesite boundary fencing is to be generally consistent with the natural surrounds. Masonry fencing is to be in context with the dwelling and pre-painted sheet steel fencing is to be similar to those specified in the table on the right from the Colorbond® range. Refer to figure 2.16.5.
- The colour and materials of fencing are to be shown on the building plans submitted. Refer to figure 2.16.5b.

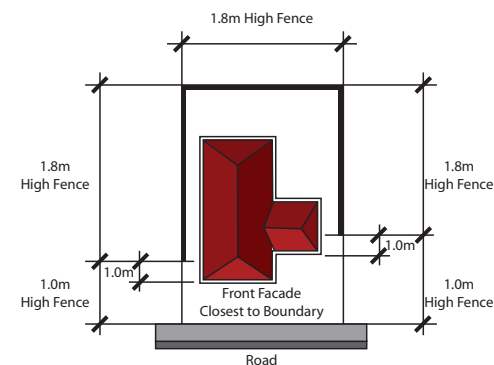


Figure 2.16.5. Common boundary fencing

Riversand®

Grey Ridge®

Teatree®

Meadow®

Willow®

Evergreen®

Hedge®

Figure 2.16.5b. Approved Colorbond® Fencing Colours

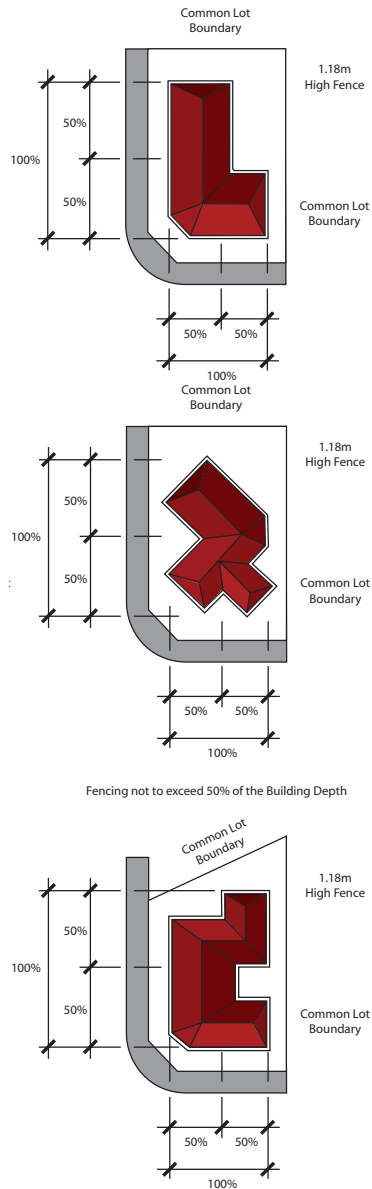


Figure 2.16.6. Lot fencing on corner lots

(iv) Corner Homesite Fencing

Fencing on boundaries of corner homesites are to comply with the following provisions:

- Fencing over 1 m in height along the lot boundary abutting a road reserve or park or reserve (permitted up to 1.8 m) is:
 - not to exceed more than 50% of the length of the home fronting that road boundary (measured in accordance with Figure 2.16.6), and
 - only permitted on one street frontage per corner homesite.
- Fencing abutting a road reserve or park or reserve is to be constructed of:
 - Face brick, rendered brick or rendered blockwork, or
 - Face brick, rendered brick or rendered blockwork piers with infill panels of landscaping, decorative steel, wrought iron, decorative timber or brushwood, or
 - Brushwood.
- Where corner homesite fencing abutting a road reserve is constructed on top of a retaining wall, the total height of the front fence and retaining wall (measured from ground level on the verge side) is not to exceed 1.8 m in height. Fencing is permitted to a height of 1.8 m above a retaining wall provided the fence is set back a minimum of 500 mm from the fascia of the retaining wall. Refer to Figure 2.16.7.

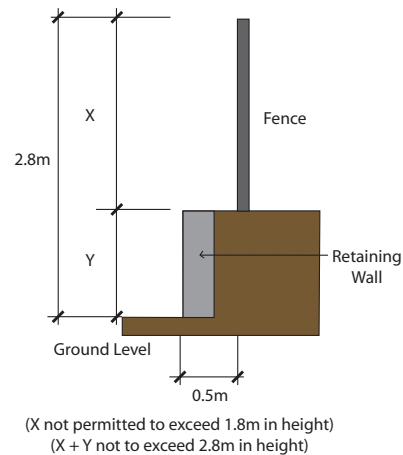
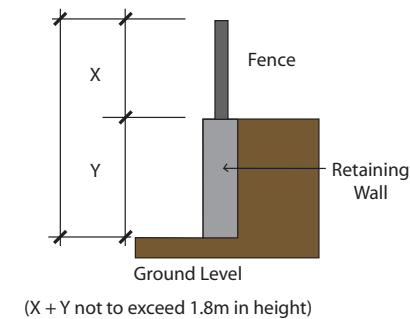


Figure 2.16.7. Lot fencing abutting a road reserve on a retaining wall

- Pre-painted sheet steel fencing along side and rear common homesite boundaries on corner homesites is not to extend past a point measured to be 2.9 m behind the minimum building setback for the corner homesite. Fencing forward of this point is to be constructed of face brick, rendered brick or rendered blockwork with or without visually permeable infill panels of landscaping, decorative steel, wrought iron, brushwood, or decorative timber. Refer to Figure 2.16.7.

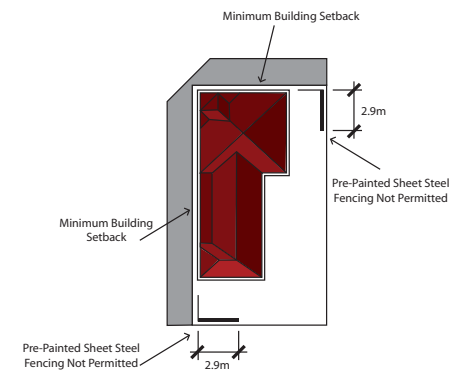


Figure 2.16.8. Pre-painted sheet steel fencing on common lot boundaries



(v) Return Fencing

Return fencing is the fencing that connects the boundary fence to your home, and must comply with the following provisions:

- Return fencing to the home is:
 - a) limited to a maximum height of 1.8m, and
 - b) to be set back a minimum of 1m behind the building façade fronting the street and closest to the homesite boundary.
- Return fencing is to be constructed from the same or similar materials as the home.
- Gates located in the return fencing are to be constructed of decorative steel, wrought iron, brushwood or decorative timber.
- Gates painted with bold primary colours are not permitted.
- Return fencing may be constructed from pre-painted sheet steel where the distance is less than 3m to the boundary, and a minimum of 5m behind the building line (maximum height 1.8m). Refer to Figure 2.16.9.

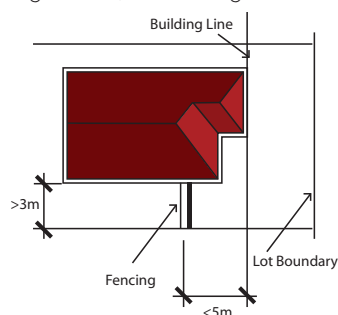


Figure 2.16.9. Return fencing permitted to be constructed from pre-painted sheet steel

2.17 GRANNY FLATS AND STUDIOS

Only one home can be built on a homesite with the exception of granny flats and studios that comply with the following provisions:

- The floor area of the granny flat or studio is not to exceed 60m².
- The granny flat or studio must comply with the setback provisions.
- The granny flat or studio is to share the private open space of the main home.
- No part of the private open space of the main home is to be fenced off or segregated from use by the granny flat or studio.
- The granny flat or studio is to be of similar appearance in materials and finishes to the main home.
- The granny flat or studio is to be attached to, or contained within, the main home.

2.18 AIR CONDITIONERS

- Roof mounted air conditioners are not permitted.
- Air conditioning condenser units are to be located on the ground floor and are not to be visible from the street.

2.19 ROOFTOP STORAGE TANKS

Rooftop storage tanks associated with solar heating systems are to be located at the rear of the roof, out of view from the street and public open space areas, or within the roof cavity.

2.20 TV ANTENNAS AND SATELLITE DISHES

TV antennas and satellite dishes are permitted providing they comply with the following provisions:

- Dishes must not be larger than 900mm in diameter.
- Dishes and antennas must be located at the rear of homes.

2.21 CLOTHESLINE

All clotheslines shall be located and/or screened to ensure they are not visible from the street.

2.22 LETTERBOXES

- All homes are to have a letterbox that is consistent with the materials of the home.
- The letterbox is to be located no further forward than the boundary of the homesite.

2.23 OUTBUILDINGS

- Any outbuilding in excess of 10m² must be of the same architectural form as the main dwelling and be constructed of the same material. The standard setbacks apply to these buildings.

2.24 FIBRE TO THE HOME

Fibre optic cable will be provided to each homesite by the National Broadband Network (NBN). This will provide access to telephone and high speed data services. Your home will need to be smart wired to ensure compatibility with the system. To ensure that your builder has considered the 'smart wiring' we ask that you acknowledge on your plans that your building will be smart wired to satisfy the requirements of NBN's standards.



3.0 ENVIRONMENTAL ELEMENTS

3.1 LANDSCAPING

At Harrington Grove, we understand that landscaping plays a crucial role not only in setting the tone for the estate, but in expressing the character of your family home. With careful planning and intelligent landscape management, you can make your home not only beautiful, but functional too. We encourage homeowners to create a landscape that allows creative expression without posing a danger to native plants or wildlife.

In order to create attractive streetscapes, it is important that gardens are landscaped to a high standard and that the landscaping is done soon after the homes are built. It is also important for homeowners that their private open space is of sufficient size, (refer to Private Open Space 2.14), accessible and receives sufficient sunlight.





The following provisions relating to landscaping apply:

Landscaping

- All parts of the homesite in front of the building and facing a street not built on or paved are to be landscaped with landscape materials such as turf, groundcover, garden beds, shrubs and trees.
- No more than 40% of the homesite between the front façade and the street boundary is to be paved.
- No more than 65% of the homesite can be impervious surfaces. These include roofs, paved pathways and driveways. Swimming pools are not included.
- All parts of the homesite in front of the building and facing a street not built on are to be landscaped using acceptable landscaping materials within 3 months of the home being occupied.
- The use of native plants that require less watering is encouraged. Information on how to design a water efficient garden is available from Harrington Estates.
- The landscaping of front gardens is an important element in the making of attractive streetscapes. Homeowners are encouraged to landscape their gardens to a high standard to complement the homes in the estate.

- Front gardens are to be landscaped with a good balance of turf, garden beds, paving, shrubs and trees.

- Homeowners are encouraged to keep their gardens well maintained. Advice on the maintenance of gardens can be obtained from Harrington Estates.
- Some plants are poisonous, propagate too readily, have invasive root systems and cause allergies, and therefore have been declared noxious. Other plants are suitable given the estate's location and climate.

Plants that are encouraged as examples that suit the estate's climate, location and environment are listed in the Harrington Grove Landscape Design Booklet, available from Harrington Estates.



Betula pendula - Silver Birch



Clematis aristata - Native Clematis





Hymenosporum flavum -
Native Frangipanni



Camellia japonica -
Camellia



Callistemon viminalis -
Red Flowering Bottlebrush



Agave attenuata -
Agave

Below are some examples of plants that are encouraged:

Hymenosporum flavum - Native Frangipanni
Camellia japonica - Camellia
Callistemon viminalis - Red Flowering Bottlebrush
Agave attenuata - Agave
Betula pendula - Silver Birch
Clematis aristata - Native Clematis

The following plants are not encouraged:

Acacia baileyana - Cootamundra Wattle
Acacia podalyriifolia - Mt Morgan Silver Wattle
Acer negundo - Box Elder
Syagrus romanzoffianum - Cocos Island or Queen Palm
Asparagus densiflorus cv Myers - Fox Tail Fern
Asparagus densiflorus cv Sprenger - Climbing Asparagus
Buddleia davidii - Butterfly Bush or Summer Lilac
Crocsmia x crocosmiiflora - Monbretia
Cytisus scoparius - Scotch or common broom
Lantana camara hybrids - Lantana hybrids
Lilium formosanum - Formosa Lily
Thunbergia alata - Black Eyed Susan
Acer pseudoplatanus - Sycamore maple
Hedera helix - English Ivy
Ilex aquifolium - Common Holly
Tecoma stans - Golden Bells
Zantedeschia aethiopica - White arum lily
Coprosma repens - Mirror plant
Platanus - hybrid plane tree
Populus var - Populars

The following plants are not permitted:

Trees

Olea europaea subsp. africana - African Olive
Cinnamomum camphora - Camphor Laurel
Erythrina crista-galli - Cocks Comb Coral Tree
Acacia Karoo - Karoo Thorn
Miconia spp. - Miconia
Ligustrum lucidum - Large Leaf Privet
Toxicodendron succedanium - Rhus Tree
Salix spp. (except *S.babylonica*;
S.calodendron & *S. reichardtii*) - Willows

Shrubs

Chrysanthemoides monilifera - Bitou Bush
Genista monspessulana - Cape Broom
Senna pendula - Cassia
Cestrum parqui - Green Cestrum
Kochia scoparia (except *K. scoparia subsp. Tricophylla*) - Kochia
Lantana camara - Lantana (red or pink)
Ochna serrulata - Ochna
Cytisus scoparius - Scotch / English Broom
Chromolaena odorata - Siam Weed
Ligustrum sinense - Small Leaf Privet

Vines And Scramblers

Rubus fruticosus - Blackberry
Asparagus asparagoides - Bridal Creeper
Delairea odorata - Cape Ivy
Macfadyena unguis-cati - Cats Claw Creeper
Asparagus plumosus - Climbing Asparagus
Ipomea cairica - Coastal Morning Glory
Anredera cordifolia - Madeira Vine
Ipomea indica - Morning Glory
Araujia hortorum - Moth Vine

Herbs

Centaurea nigra - Black Knapweed
Orobanche spp. (except *O. minor* and *O. cernua var Australiana*) - Broomrape
Nephrolepis cordifolia - Fishbone Fern
Harrisia spp Harrisia cactus
Hieracium spp. - Hawkweeds
Equisetum spp. - Horsetail
Parthenium hysterophorus - Parthenium Weed
Parietaria judacia - Pellitory / Asthma Weed
Opuntia spp. (except *O.ficus indica*) - Prickly Pears
Hypericum perforatum - St Johns's Wort
Centaurea maculosa - Spotted Knapweed
Tradescantia albiflora/Tradescantia fluminensis - Trad

Grasses

Arundo donax - Giant Reed
Nassella tenuissima syn Stipa tenuissima - Mexican feather grass
Cortaderia spp. - Pampas Grass
Phyllostchys spp. - Rhizomatus Bamboo
Paspalum quadrifarium - Tussock Paspalum

Aquatic Weeds

Alternanthera philoxeroides - Alligator Weed
Cabomba spp. (except *Cabomba furcata*) - Cabomba
Lagarosiphon major - Lagarosiphon
Ludwigia peruviana - Ludwigia
Ludwigia longifolia - Longleaf Willow Primrose
Salvinia molesta - Salvinia
Gymnocoronis spilanthoides - Senegal Tea Plant
Eichornia crassipes - Water Hyacinth
Pistia stratiotes - Water Lettuce

3.2 BUSHFIRE PLANNING

While the natural surroundings of Harrington Grove provide a beautiful and peaceful place to live, the expanse of woodland and natural foliage can potentially create a bushfire risk in dry times.

The estate has been planned, and is being continually developed in accordance with the adopted Bushfire Management Plan. This Plan identifies the bushfire hazards over the estate and prescribes measures to mitigate the risk. Some of these measures, such as the provision of asset protection zones along the boundaries of the bushland, have been incorporated into the development.

Bushfire risks can be further mitigated by ensuring that the method and materials of construction of the homes are appropriate. Australian Standard AS3959 deals with the construction of buildings in bushfire-prone areas and details the construction requirements for bushfire risk levels.

Figure 3.2 shows the construction levels required for AS3959 over the precinct. Homes must be constructed in accordance with the requirements of AS3959 for the specified construction level.

The table in Appendix A provides a summary of the construction requirements of AS3959 and is provided as a guide. These requirements change from time to time, so it is important that your builder and/or architect is familiar with AS3959 to ensure that your home is designed and built in full accordance with its provisions.

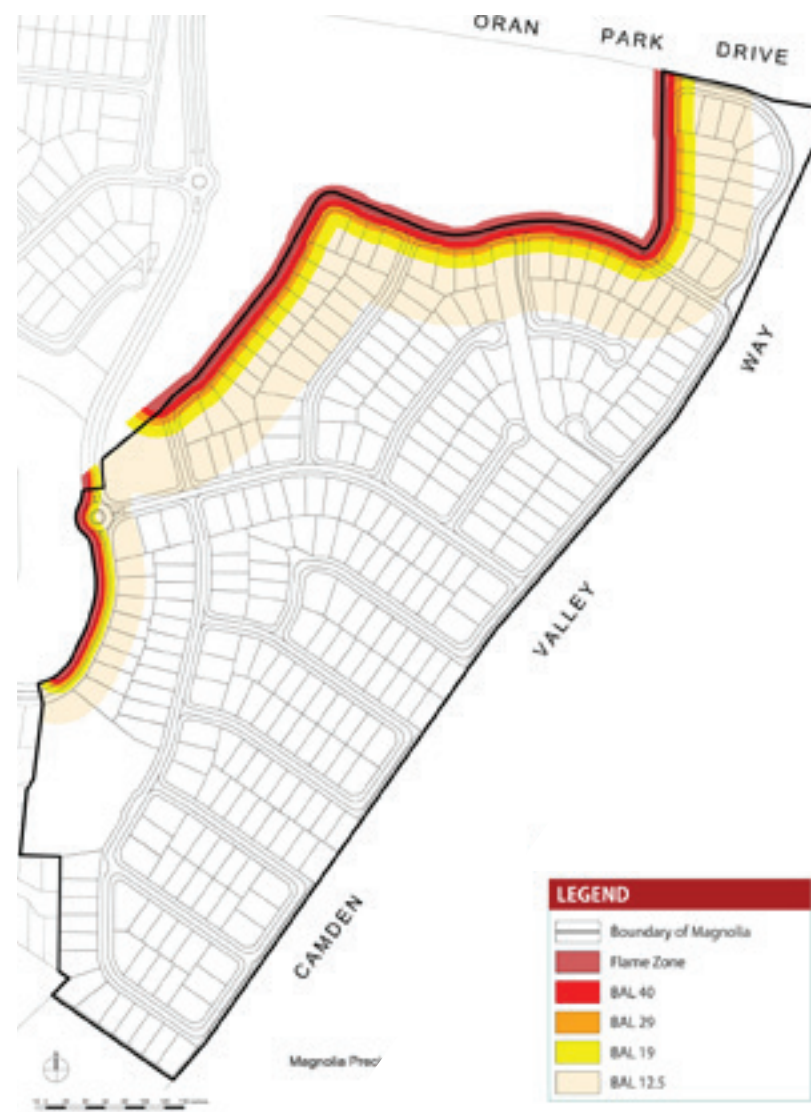


Figure 3.2. Bushfire construction level AS3959

BALs have been calculated in accordance with the deemed-to-satisfy methodology of Planning for Bushfire Protection 2006 (incorporating the Appendix 3 Addendum 2010) and AS 3959-2009 Construction of buildings in bushfire-prone areas (Amendment 3).



3.3 BUILDING IN SALINE AREAS

Salt occurs naturally in the soils of Sydney, though the concentration may vary depending on factors such as topography, location and slope of the land. These salts can lead to deterioration and damage to buildings if appropriate measures are not taken during construction.

Similarly, the pH or acidity of soils varies naturally and can result in damage to buildings. These soils can be aggressive to the concrete and steel used in homes.

A geotechnical investigation has been undertaken to identify the salinity and acidity of the soils in Harrington Grove. Some soils are slightly saline or mildly aggressive.

To reduce the long term impact of salts and acid on homes in Harrington Grove, the following building controls apply, which are consistent with Camden Council's Policy No. 1.15 – Building in Saline Prone Environments.

- Slightly Saline and Non Saline Areas:
 - a) The design of driveways and verge areas are to facilitate the effective drainage of surface water and avoid excessive concentrations of run-off or ponding.
 - b) Masonry buildings are to include the installation of a brick damp course that cannot be bridged internally or externally.
 - c) Landscaping is not to be placed against masonry walls where it could allow bridging of the damp course.
- Areas with Aggressivity to Concrete and Steel:
 - a) A bedding layer of sand with a minimum depth of 50mm is to be provided underneath the concrete slab.
 - b) A membrane of thick plastic (damp-proof as opposed to vapour-proof) is required under the concrete slab to provide a moisture barrier and drainage layer to restrict capillary action.
 - c) The damp-proof membrane is to be extended to the outside face of the external edge beam, up to the finished ground level.
 - d) A concrete strength of 32 MPa or sulphate-resisting cement with a water cement/ratio no greater than 0.5 is to be used.
 - e) High-grade saline resistant materials are to be used in all underground service lines.
 - f) The minimum concrete cover to steel reinforcement is to be:
 - 50mm from unprotected ground, or
 - 30mm from a membrane in contact with the ground, or
 - 50mm for strip footings and beams (with or without a damp proof membrane).
 - g) Concrete slabs are to be vibrated and then cured for a minimum of 3 days.



3.4 WATER AND ENERGY CONSERVATION

- All homes are to include rainwater tanks in accordance with Camden Council's requirements.
- All homes are to comply with the requirements of BASIX in respect to water and energy conservation.

3.5 ACOUSTIC PRIVACY

Everyone wants to enjoy their home without being disturbed by noisy neighbours. Transmission of noise from a home can be reduced by the use of design features. Where possible, noise is to be contained within the home or communal areas without unreasonable transmission to adjoining homes. In order to achieve this, the following principles should be followed:

- Active recreation facilities (such as swimming pools) should be located away from, or shielded from, the bedrooms of adjacent homes where possible.
- Air conditioning units should be located away from bedrooms of adjacent homes where possible.
- Living rooms or garages are not to abut bedrooms of adjacent homes where possible.

All home owners are encouraged to be considerate to their neighbours by avoiding undue noise.

3.6 ACOUSTIC ASSESSMENTS

Some homesites situated within the Magnolia Precinct require acoustic attenuation of the home. This is required to ensure that the proposed home provides sufficient acoustic shielding for the dwelling and to the private open space at the rear of the dwelling. The homesites that require treatment are shown on the lot diagram applicable to the individual lot (see figure 3.6.1 and 3.6.2). The attenuation can be achieved by undertaking the following modifications:

- Orientation of rooms: The layout of the rooms within a building is important in determining individual noise exposure.

The less noise sensitive rooms such as garages, bathrooms and laundries should be located closer to the noise source to provide a buffer zone to noise sensitive areas such as bedrooms and frequently used living areas.

- Windows: Windows and doors present acoustic weaknesses which control the overall sound transmission loss. Buildings should be constructed so that façades most exposed to the noise source have minimum number of windows and doors to reduce the internal noise levels.

In the initial acoustic assessment, glazing performance was assessed against $L_{Aeq,1\text{ hour}}$ noise levels.

Habitable rooms facing Camden Valley Way are exposed to road traffic noise and should be provided with mechanical ventilation and thickened glass in windows to achieve compliance with AS/NZS 2107 Acoustics-Recommended Design Sound Levels and Reverberations Times for Building Interiors.

Dwellings constructed in accordance with the following requirements presented in Table 3.5 below will have sufficient sound attenuation to achieve compliance.

FAÇADE TYPE	CONSTRUCTION
Type 1	Standard Construction (4mm float glass)
Type 2	6mm laminated glass

Table 3.5 Façade Construction

The recommendations have been based on the following assumptions:

- The building façade will be brick veneer construction;
- All two storey dwellings will have each storey assessed independently;
- Lounges will have minimum room dimensions of 4x4x2.4m and bedrooms will have minimum room dimensions of 3x4x2.4m;
- Lounges have been assessed assuming the façade facing Camden Valley Way have a maximum of 50% or 100% glazing and bedrooms have a maximum of 50% glazing;
- Rooms will include with soft furnishings typical of the rooms usage, ie lounge or bedroom;
- External doors facing Camden Valley Way will be solid core (not acoustically sealed)
- Window detailing will have gaps between the window frames and the house frame/masonry sealed with flexible mastic.
- Hinged or casement windows are preferred over sliding windows as the former two have more effective sealing mechanisms. The overall intent is to form an air-tight construction.
- Acoustic insulation such as polyester or rock wool/glass wool batts placed between the wall studs of brick veneer and timber framed buildings will reduce the noise entering the building.





Figure 3.6.1 Ground Level Construction Standards



Figure 3.6.2 Upper Level Construction Standards

3.7 PATHWAYS

Sharepaths and footpaths will be provided by Harrington Estates in the locations shown in Figure 3.7.

3.8 BUS ROUTES

The provision of a bus service is subject to the private bus operators that service the region. It is intended that bus services will operate on the roads shown in Figure 3.7.

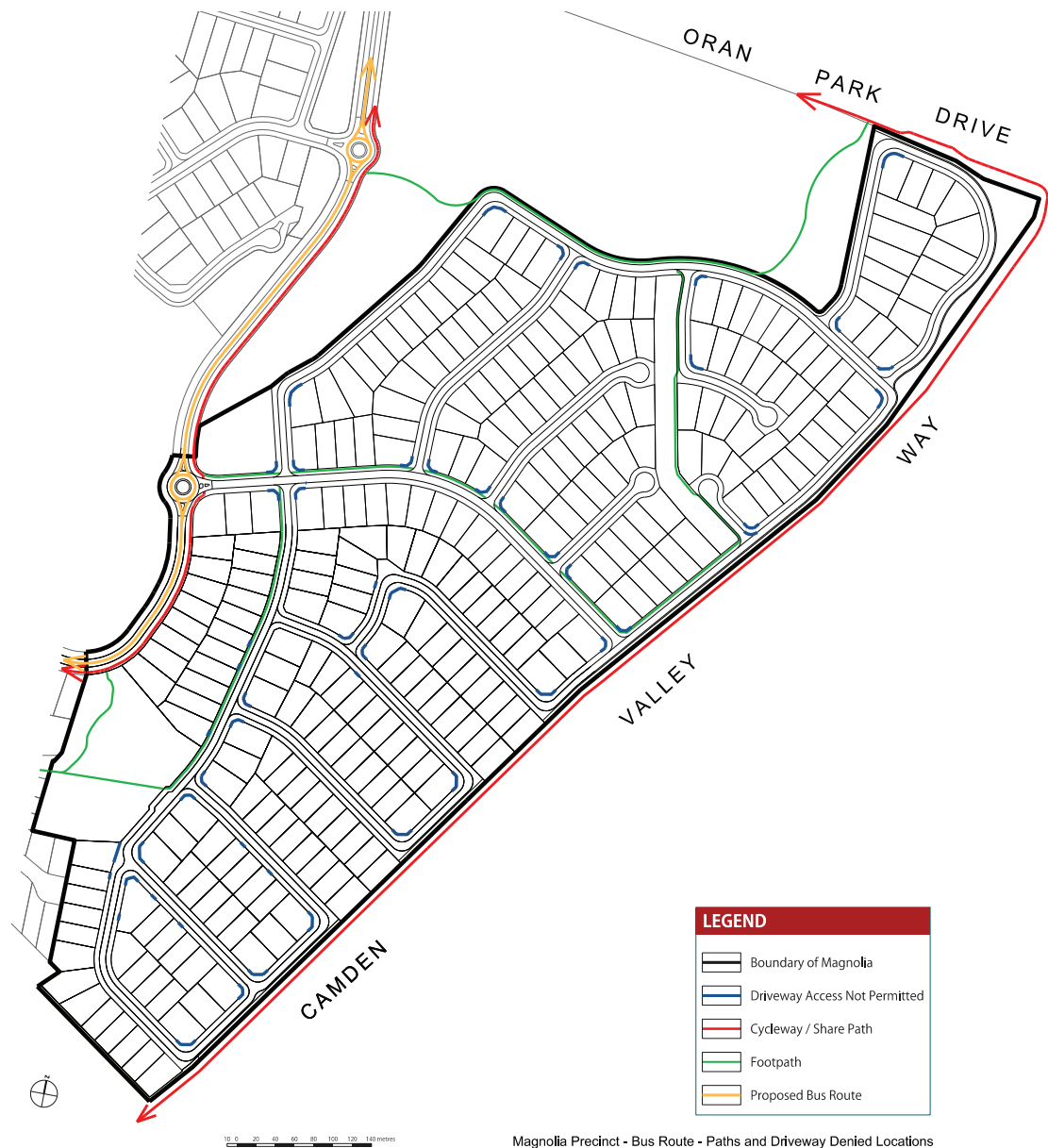


Figure 3.7. Pathways & Bus Routes

Magnolia Precinct - Bus Route - Paths and Driveway Denied Locations



APPENDIX A: BUSHFIRE PREVENTION MEASURES

SUMMARY OF AS3959 CONSTRUCTION OF BUILDINGS IN BUSHFIRE-PRONE AREAS

Source: RFS (2006)

Note: This is a summary and does not include all requirements under AS3959.

	FLOORING SYSTEMS	EXTERNAL WALLS
BAL 40	<ul style="list-style-type: none"> Concrete slab on ground; or Enclosed subfloors with enclosure meeting the requirements of an 'external wall' or fully screened meeting the requirements of 'vents and weepholes' or a combination of the above; or Unenclosed subfloors, all material less than 400mm above ground level shall be; <ul style="list-style-type: none"> (a) be non-combustible (e.g., concrete, steel); or (b) have the underside of the combustible elements of the floor system protected with a non-combustible material (e.g., fibre-cement sheet or metal sheet); or (c) comply with AS 1530.8.1; or (d) be a combination of any of Items (a), (b) or (c) above. 	<p>Walls shall be one of the following:</p> <ul style="list-style-type: none"> (a) Walls made from non-combustible material (e.g., full masonry, brick veneer, mudbrick, concrete, aerated concrete).or (b) Timber-framed or steel-framed walls that are sarked on the outside of the frame and clad with- <ul style="list-style-type: none"> (i) fibre-cement external cladding, a minimum of 9 mm in thickness; or (ii) steel sheeting; or (iii) a combination of Items (i) and (ii) above.or (c) A system complying with AS 1530.8.1. or (d) A combination of any of Items (a), (b) or (c) above.
BAL 29	<ul style="list-style-type: none"> Concrete slab on ground; or Enclosed subfloors with enclosure meeting the requirements of an 'external wall' or fully screened meeting the requirements of 'vents and weepholes' or a combination of the above; or Unenclosed subfloors, all material less than 400mm above ground level shall be; <ul style="list-style-type: none"> (a) non-combustible (e.g., concrete, steel); or (b) of bushfire-resisting timber; or (c) particleboard or plywood flooring where the underside is lined with sarking-type material or mineral wool insulation; or (d) a system complying with AS 1530.8.1; or (e) a combination of any of Items (a), (b), (c) or (d) above. 	<p>Walls shall be one of the following:</p> <ul style="list-style-type: none"> (a) Made of non-combustible material (e.g., full masonry, brick veneer, mud brick, concrete, aerated concrete). or (b) Made of timber-framed or steel-framed walls that are sarked on the outside of the frame and clad with- <ul style="list-style-type: none"> (i) fibre-cement external cladding, a minimum of 6 mm in thickness; or (ii) steel sheet; or (iii) bushfire-resisting timber; or (iv) a combination of any of Items (i), (ii) or (iii) above. or (c) A combination of Items (a) and (b) above.
BAL 19	No requirements	<p>That part of an external wall surface that is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall shall be of-</p> <ul style="list-style-type: none"> (a) non-combustible material; or (b) fibre-cement external cladding, a minimum of 6 mm in thickness; or (c) bushfire-resisting timber; or (d) a timber species as specified in AS3959; or (e) a combination of any of Items (a), (b), (c) or (d) above.
BAL 12.5	No requirements	<p>That part of an external wall surface that is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall shall be of-</p> <ul style="list-style-type: none"> (a) non-combustible material; or (b) fibre-cement external cladding, a minimum of 6 mm in thickness; or (c) bushfire-resisting timber; or (d) a timber species as specified in AS3959; or (e) a combination of any of Items (a), (b), (c) or (d) above.

SUMMARY OF AS3959 CONSTRUCTION OF BUILDINGS IN BUSHFIRE-PRONE AREAS

Source: RFS (2006)

Note: This is a summary and does not include all requirements under AS3959.

	VENTS AND WEEPHOLES	EXTERNAL DOORS	WINDOWS	SUPPORTING POSTS, COLUMNS, STUMPS, PIERS AND POLES
BAL 40	Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel or bronze except where they are less than 3 mm	External doors shall be either: <ul style="list-style-type: none"> • Non-combustible • Solid core door fitted with door screens that meet the requirements for 'vents and weepholes'; or • Fully framed glazed door meeting glazing and frame requirements, glazing to be a minimum 6mm thick and the bottom 400mm screened External doors shall be fitted with draught excluders. Frames are to be metal.	<ul style="list-style-type: none"> • Protected by shutters: or • Frames shall be metal and glazing shall be minimum 5mm toughened glass and the entire window is to be screened. 	No requirements if enclosed consistent with 'Flooring systems'. Where the subfloor space is unenclosed, the support posts, columns, stumps, piers and poles shall be: <ul style="list-style-type: none"> (a) of non-combustible material; or (b) a system complying with AS 1530.8.1; or (c) a combination of Items (a) and (b) above.
BAL 29	Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where they are less than 3 mm.	External doors shall be either: <ul style="list-style-type: none"> • Non-combustible • Solid core door • Hollow door fitted with door screens that meet the requirements for 'vents and weepholes'; or • Fully framed glazed door meeting glazing and frame requirements, glazing to be a minimum 5mm thick and the bottom 400mm screened External doors shall be fitted with draught excluders. Frames are to be bushfire resistant timber, metal or metal reinforced PVC-U.	<ul style="list-style-type: none"> • Protected by shutters: or • Frames shall be bushfire resistant timber, metal or reinforced PVC-U and glazing shall be minimum 5mm toughened glass and openable windows are to be screened. 	No requirements if enclosed consistent with 'Flooring systems'. Where the subfloor space is unenclosed, the support posts, columns, stumps, piers and poles shall be: <ul style="list-style-type: none"> (i) of non-combustible material; or (ii) of bushfire-resisting timber; or (iii) a combination of Items (i) and (ii) above.
BAL 19	Vents and weepholes in external walls shall be screened with mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where they are less than 3 mm, or are located in an external wall of a subfloor space.	External doors shall be either: <ul style="list-style-type: none"> • Fitted with door screens that meet the requirements for 'vents and weepholes'; or • Solid core door • Hollow door with non-combustible kick-plate; or • Fully framed glazed door meeting glazing and frame requirements, glazing to be a minimum 5mm thick External doors shall be fitted with draught excluders	<ul style="list-style-type: none"> • Protected by shutters: or • External screens meeting the requirements of 'vents and weepholes'; or • If within 400mm of the ground or surface, glazing is to be a minimum of 4mm thick and openable windows are to be screened. Frames shall be bushfire resistant timber, metal or reinforced PVC-U. 	No requirements
BAL 12.5	Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where the vents and weepholes are less than 3 mm, or are located in an external wall of a subfloor space.	External doors shall be either: <ul style="list-style-type: none"> • Fitted with door screens that meet the requirements for 'vents and weepholes'; or • Solid core door • Hollow door with non-combustible kick-plate; or • Fully framed glazed door meeting glazing and frame requirements External doors shall be fitted with draught excluders	<ul style="list-style-type: none"> • Protected by shutters: or • External screens meeting the requirements of 'vents and weepholes'; or • If within 400mm of the ground or surface, glazing is to be a minimum of 4mm thick and openable windows are to be screened and frames shall be bushfire resistant timber, metal or reinforced PVC-U. 	No requirements



SUMMARY OF AS3959 CONSTRUCTION OF BUILDINGS IN BUSHFIRE-PRONE AREAS

Source: RFS (2006)

Note: This is a summary and does not include all requirements under AS3959.

	ROOFS	ROOF PENETRATIONS (LIGHTS, VENTILATORS ETC)	VERANDAHS AND DECKS
BAL 40	As per BAL 12.5 except that aluminium screens shall not be used	As per BAL 12.5 except that glazed assemblies for roof lights and skylights shall have an FRL of -/30/-.	Enclosed subfloor spaces require decking to be non-combustible or a system complying with AS1530.8.1. Unenclosed subfloor spaces requiring decking, supports and framing to be non-combustible or a system complying with AS1530.8.1. All balustrade and handrails less than 125mm from glazed elements must be non-combustible.
BAL 29	As per BAL 12.5	As per BAL 12.5	Enclosed subfloor spaces require decking to be non-combustible or bushfire resistant timber. Unenclosed subfloor spaces requiring decking, supports and framing to be non-combustible or bushfire resistant timber. All balustrade and handrails less than 125mm from glazed elements must be non-combustible or bushfire resistant timber.
BAL 19	As per BAL 12.5	As per BAL 12.5	As per BAL 12.5
BAL 12.5	<p>Sheeted roofs – only metal or fibre-cement sheet shall be used. Gaps are to be sealed or protected by;</p> <ul style="list-style-type: none"> Fully sarking the roof (sarking must have a flammability index of not more than 5) or Providing corrosion resistant steel or bronze mesh, profiled metal sheet, neoprene seal, compressed mineral wool or similar material Rib caps and ridge caps shall be sealed using methods outlined in the AS3959 Tiled roofs shall be provided with sarking with a flammability index of not greater than 5. 	<p>All penetrations of the roof space shall be sealed with a non-combustible material to prevent gaps greater than 3mm.</p> <p>All overhead glazing shall be Grade A laminated safety glass complying with AS 1288</p>	<p>Decking that is within 300mm horizontally and 400mm vertically of a glazed element must be non-combustible or bushfire resistant timber.</p> <p>Spaced decking is recommended to have a 3mm gap between timbers.</p> <p>In enclosed subfloor spaces decking that is within 400mm of the ground is to comply with the specifications for 'walls'.</p>

SUMMARY OF AS3959 CONSTRUCTION OF BUILDINGS IN BUSHFIRE-PRONE AREAS

Source: RFS (2006)

Note: This is a summary and does not include all requirements under AS3959.

	SERVICE PIPES (Water & Gas)	GUTTERS AND DOWNPIPES	EAVES, FASCIAS AND GABLES
BAL 40	As per BAL 12.5	As per BAL 12.5 With the exception that all gutters shall be non-combustible.	Gables shall comply with the requirements of 'external walls'. Fascias shall comply with AS1530.8.1. Eaves shall comply with the requirements of 'roof penetrations'. Eaves ventilation holes greater than 3mm in width to be screened to comply with 'vents and weepholes'. Eaves shall be made of bushfire resistant timber or fibre-cement or calcium silicate with a minimum thickness of 6mm.
BAL 29	As per BAL 12.5	As per BAL 12.5 With the exception of box gutters, gutters shall be metal or PVC-U.	Gables shall comply with the requirements of 'external walls'. Fascias shall be bushfire resistant timber or metal. Eaves shall comply with the requirements of 'roof penetrations'. Eaves ventilation holes greater than 3mm in width to be screened to comply with 'vents and weepholes'. Eaves shall be made of bushfire resistant timber or fibre-cement with a minimum thickness of 4.5mm.
BAL 19	As per BAL 12.5	As per BAL 12.5	Gables shall comply with the requirements of 'external walls'. Eaves shall comply with the requirements of 'roof penetrations'. Eaves ventilation holes greater than 3mm in width to be screened to comply with 'vents and weepholes'.
BAL 12.5	All exposed piping, for water and gas supplies, shall be of metal.	Gutter and valley leaf guards shall be non-combustible. Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material.	Gables shall comply with the requirements of 'external walls'. Eaves shall comply with the requirements of 'roof penetrations'. Eaves ventilation holes greater than 3mm in width to be screened to comply with 'vents and weepholes'.

Note: Bushfire Attack Levels are generally based on providing resistance to the following types of bushfire attack:

BAL 12.5 Protection from ember attack

BAL 19 Protection from ember attack and radiant heat up to 19kw/m²

BAL 29 Protection from ember attack and radiant heat up to 29kw/m²

BAL 40 Protection from ember attack, radiant heat up to 40kw/m² and potential limited direct flame contact





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