



Avon Ridge
BRIGADOON

SUSTAINABLE
LIVING
GUIDELINES

WELCOME TO AVON RIDGE

Avon Ridge at Brigadoon is a sustainable new community by Peet Limited, set amongst the hills of the Darling Ranges overlooking the upper Swan River and Walyunga National Park.

With homesites varying in size from 1.5 hectares to more than 5 hectares and with a unique natural bush setting, residents will enjoy a very special natural setting with spectacular views and vistas across valleys and hills.

To maintain the unique features of Avon Ridge - and the value of their investment - residents are required to comply with a series of guidelines and are encouraged to adopt a sustainable lifestyle in keeping with the environment.

We invite you to join us in creating a special place to live by supporting these guidelines and creating a modern, sustainable community.

WHY SUSTAINABLE LIVING GUIDELINES?

These guidelines are an important part of ensuring that the vision for Avon Ridge becomes reality.

They will help you plan your new home in a way that contributes to the overall quality of Avon Ridge at Brigadoon and protects your investment, as well as the natural environment.

The recommended design and sustainability initiatives in this document are based on best practice principles. They provide you, your builder and/or architect with clear information, requirements and recommendations in relation to:

- > The development approval process and required document.
- > Establishing and maintaining the bushland character of this unique community.
- > Sustainable development.
- > Design measures to optimise the area's amenity.
- > Environmental protection measures;
- > Bushfire mitigation.
- > Waterwise landscaping, and protection and enhancement of the natural environment.

General and specific guidelines apply to each lot at Avon Ridge and this booklet is for all future residents - and their builders and architects.

If future residents have any difficulty in understanding or picturing what is being described, please discuss the matter with your builder or architect. Each purchaser will also be offered a two hour design consultation with Avon Ridge's project architect, Mr Ron Marchant of Zuideveld Marchant Hur.

INTRODUCTION

A UNIQUE ENVIRONMENTAL SETTING

Avon Ridge is located within the natural environment of the Darling Range on the edge of the Darling Scarp. There are several environmentally significant areas surrounding Avon Ridge including Parks and Recreation Reserves, Walyunga National Park, Avon Valley National Park, the Swan/Avon River and the Paruna Wildlife Sanctuary.

These areas support a rich diversity of plants and animals, including many endangered and vulnerable species. They are critical for the conservation of flora and fauna along the Swan/Avon River. This river leads into the iconic Swan Valley and finally Fremantle Harbour, a pivotal feature of Western Australia's identity. The environment of these important natural areas is connected to Avon Ridge.

Given the environmental significance of Avon Ridge and the surrounding area, Peet is committed to retaining the unique natural environment of the estate. Therefore, any vegetation clearing required for homes will be strictly controlled through Protective Covenants.

Limiting clearing will help retain the unique bushland feel of the estate and provide an intimate bushland setting, close to nature. Protection of the native vegetation at your home will encourage the presence of flora and fauna and contribute to preservation of the natural environment at Avon Ridge as well as the surrounding landscape.

PROTECTIVE COVENANTS

The Sustainable Living Guidelines should be read in conjunction with the Protective Covenants (specified as part of your Contract of Sale). The Covenants will include some, but not necessarily all of the matters covered in the Guidelines.

One particularly important element of the Protective Covenants will be the restrictions on clearing, such that no clearing can be undertaken other than what is required for homes and fire management. This will ensure that significant vegetation is retained throughout Avon Ridge to maintain a high quality bushland lifestyle. This will also allow native wildlife to continue to use the estate, including endangered Black Cockatoo species.

OTHER IMPORTANT DOCUMENTS

The Sustainable Living Guidelines should also be read in conjunction with a number of other relevant statutory documents relating to the construction of your new home including:

- > City of Swan Local Planning Scheme No. 17 (LPS 17) and its applicable policies.
- > Building Code of Australia (BCA).
- > Australian Standard AS3959-2009 Construction of Buildings in Bushfire-prone Areas.
- > Standards Australia Handbook HB330-2009 Living in bushfire-prone areas.

The requirements and recommendations in these documents benefit all home owners by ensuring minimum standards are achieved throughout the entire community.

OPEN JARRAH WOODLAND



RED-LEAVED SUNDEW
- *DROSER A BULBOSA*



GOMPHOLOBIUM



YOUR DESIGN AND BUILDING APPROVAL PROCESS

STEP ONE: PREPARING YOUR DESIGN APPROVAL SUBMISSION PACKAGE

Work with your architect and builder to prepare house plans that adhere to the requirements of these Guidelines and the applicable Protective Covenants.

At this step, you will also need to have your first of two meetings on site with the project Fire Management Consultant. The Consultant will determine your bushfire attack level (BAL) in accordance with AS 3959-2009. Together you will be able to plan the most strategic location for your home and discuss appropriate vegetation modification.

If you have queries about the preparation of your Design Approval Submission Package for Peet, please speak with the project architect during your consultation and to your own architect and/or builder. You are also welcome to contact Peet to ensure the intent of the Guidelines and Covenants are properly interpreted and addressed.

STEP TWO: PEET APPROVAL

Submit your Design Approval Submission Package, including final house plans, checklists and colour palette for assessment by Peet (or its delegated representative). These documents must have Peet's, or its representative's, stamped endorsement before they can be lodged with the City of Swan.

The required checklists can be found at the rear of these Guidelines and must be completed and submitted to Peet.

There are four checklists:

- > Living in a bushland environment - 10 points must be achieved
- > Sustainable Living - 10 points must be achieved
- > Bushfire safety - 20 points must be achieved
- > Designing Your Sustainable Home - 15 points must be achieved

To undertake the assessment of your house plans, Peet (or its representative) requires three paper copies or one A3 digital copy of an Endorsement Application which must include a site plan at a suitable scale, and floor plans and elevations at 1:100 scale illustrating the proposed home and other outbuildings, external materials and finishes, together with the required checklists completed.

In particular, the following elements must be indicated on the drawings:

- > Extent of siteworks for the building, shed(s), pool and proposed driveway access (including size and width specifications).
- > Proposed building, outbuildings or other structures and relative setbacks.
- > Extent of native vegetation proposed to be cleared, including an estimate of numbers and square metres.
- > Proposed landscaped and paved areas.
- > Location of any fencing.
- > Any swimming pools and/or tennis courts.
- > Location of the Aerobic Treatment Unit (ATU) and associated irrigation area(s).

Your Design Approval Submission Package should be submitted to:

Avon Ridge Design Approval

C/o Zuideveld Marchant Hur, Architects
PO Box 110, Northbridge WA 6865 or
ronm@zmha.com.au.

A copy of compliant designs will be stamped "Approved" and returned to you (the property owner).

Following Peet's approval, you can then go ahead with your detailed construction drawings in preparation for the Building Licence application to the City of Swan.

STEP THREE: CITY OF SWAN BUILDING LICENCE APPLICATION

Your Building Licence application to the City of Swan must include a copy of the stamped approved design, drawings and any associated advice notes in addition to the detailed construction drawings and applicable fee normally required by the City.

Information about what is required by the City of Swan before it can issue a building permit for your new home can be found on its website at www.swan.wa.gov.au.

STEP FOUR: APPROVAL AND CONSTRUCTION

Once you have received approval from the City of Swan, you will need to organise your second onsite consultation with the project's Fire Management Consultant. You are then free to start construction of your new home at Avon Ridge!

The Fire Management Consultant will also visit your new home once construction is complete to ensure clearing has been undertaken in accordance with the original advice provided at your planning and design stage.

APPROVAL PROCESS

PREPARE DESIGN DRAWINGS IN ACCORDANCE WITH GUIDELINES



SUBMIT TO PEET NOMINATED REPRESENTATIVE

- 1 Digital or 3 paper copies
 - > Building Plans (including site plan)
 - > External Finishes Schedule/Colours
- > Location of air conditioning plant. (Colour if roof mounted)
 - > Completed Checklists



APPLICATION ENDORSED BY PEET NOMINATED REPRESENTATIVE



PREPARE DETAILED CONSTRUCTION DRAWINGS



SUBMIT BUILDING LICENCE APPLICATION TO CITY OF SWAN (INCLUDING A COPY OF THE STAMPED APPROVED ENDORCEMENT SET)



CITY APPROVAL RECEIVED



COMMENCE CONSTRUCTION



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SITE PARAMETERS AND PLANNING: YOUR GUIDE TO MAKING THE MOST OF YOUR NEW HOMESITE

SITE PARAMETERS AND PLANNING

SITE PARAMETERS

Plan well to make the most of your site before you design or build your new home.

Every homesite at Avon Ridge is different and your home design and orientation should maximise its best features, so you can make the most of the Avon Ridge lifestyle.

In keeping with sustainability principles, it is also recommended that dwellings be designed to minimise energy consumption.

WHERE YOU CAN BUILD: YOUR BUILDING ENVELOPE

The area where you can build on your homesite at Avon Ridge (the building envelope) cannot exceed 10% of the total area of your lot.

A maximum of 1,000sqm of existing vegetation is allowed to be cleared within the selected building envelope. This includes clearing for homes, outbuildings, sheds, pools, gardens and driveways.

The building envelope must be within a defined building envelope area (if applicable) and that zone is indicated in your Contract of Sale and the approved estate Structure Plan.

You may build within an area that is not greater than 10% of your total lot size and is at least 15 metres from the road reserve; 30 metres from your neighbour's boundary and 30 metres from any designated public open space.

The City of Swan approval process includes checking that your building plans comply with the setback requirements.

OTHER RESTRICTIONS ON YOUR BUILDING ENVELOPE

Your building envelope may also not impinge or have any impact on:

- > Areas of 'pristine vegetation'.
- > Areas of 'excellent vegetation'.
- > Potential priority flora habitats.
- > Aboriginal heritage sites.
- > Habitat trees.

These areas are marked on Figure 3 on page 5.

The building envelope zone is generally defined by the minimum setbacks which are as follows:

BOUNDARY	MINIMUM SETBACK
Road reserve	15 metres
Common lot boundaries	30 metres
Public open space	30 metres
Strategic firebreaks	60 metres from outer edge of firebreak

SITE PARAMETERS AND PLANNING



Figure 1: Subdivision Plan

SITE PARAMETERS AND PLANNING

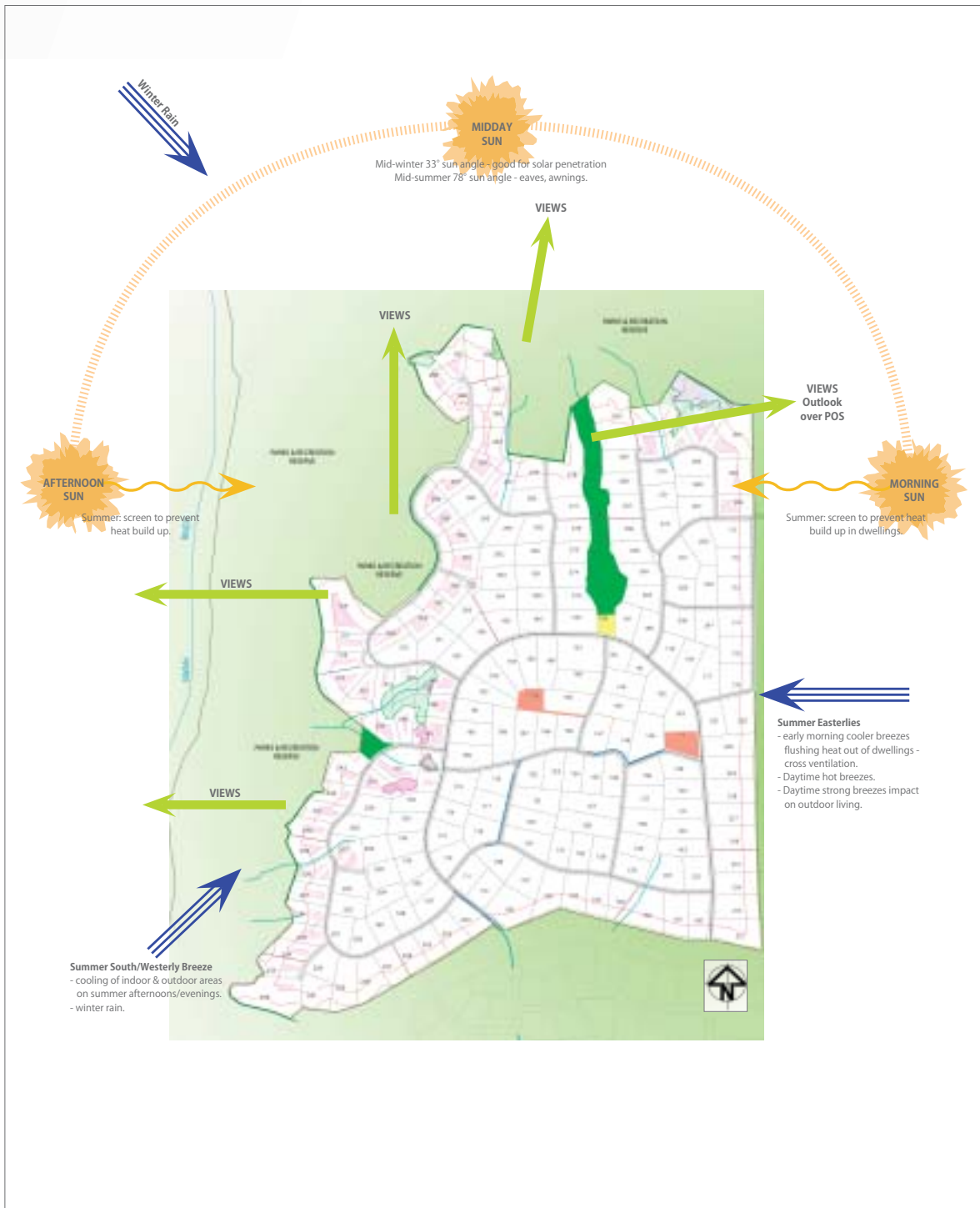


Figure 2: Site Design Parameters.

SITE PARAMETERS AND PLANNING

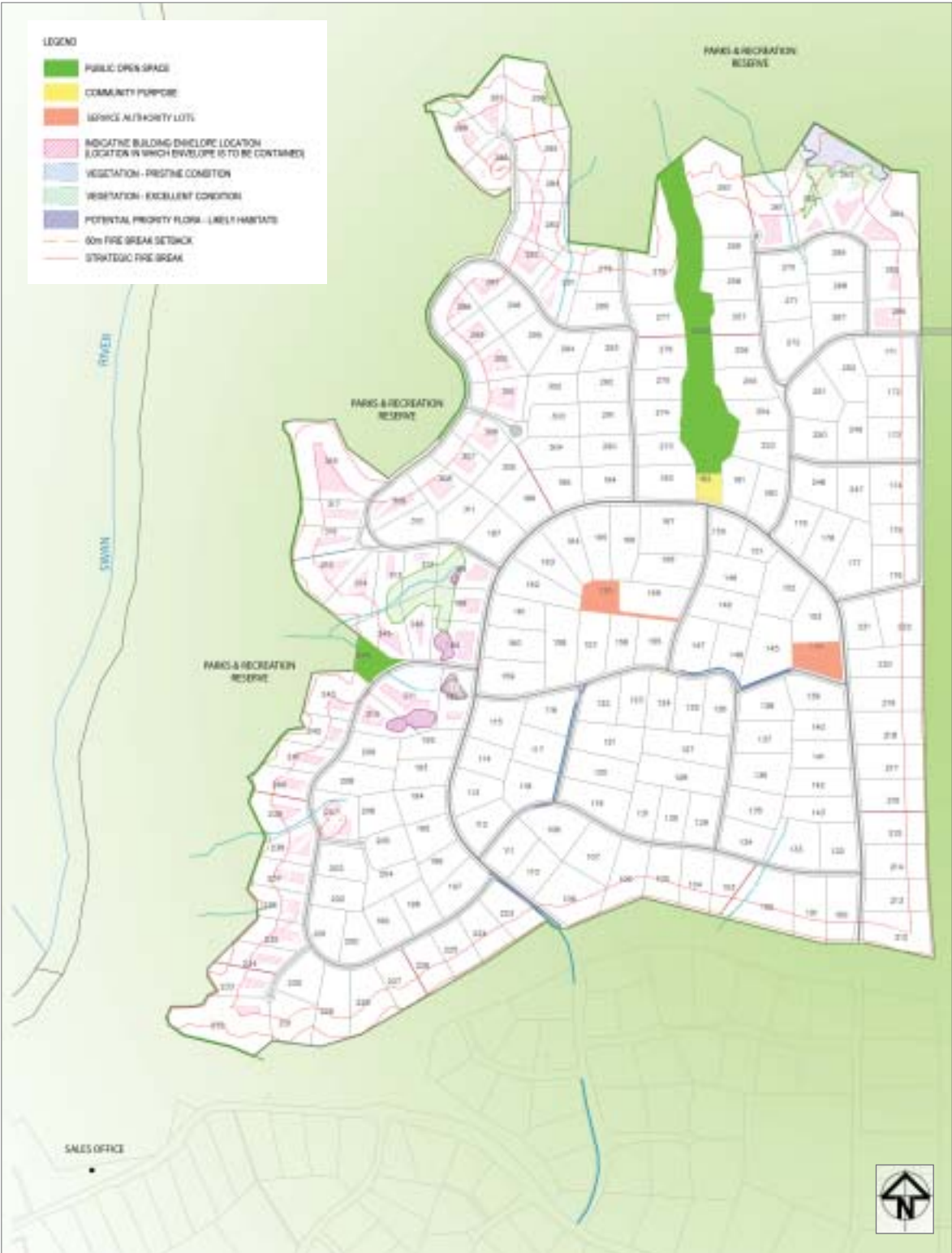


Figure 3: Overall Development Plan.

SITE PARAMETERS AND PLANNING

ORIENTATION AND DESIGN CONTOURS

The natural contours or slope of your lot within the building envelope provide opportunities to maximise views and will also:

- > Determine whether it is feasible to construct a concrete slab on ground or framed construction which floats above the site's undulations.
- > Impact on vehicle access routes and drainage particularly on steeper lots.
- > Determine whether internal/external living area relationships are possible at ground level or through the use of decks sitting above the ground.

SOLAR ACCESS

Avon Ridge provides ample opportunity to plan homes that make the most of the opportunities for spectacular views as well as northern winter solar access for the natural heating of internal and external living areas.

To facilitate energy efficiency and enhance liveability for you and your neighbours, the following considerations in relation to orientation and design should be taken into account:

- > Orientate your home with daytime living areas and large windows facing north, to allow passive heating from the low winter sun. The ideal orientation for living areas is within 15°W to 20°E of true north.
- > If you are locating your primary outdoor living area facing north to take advantage of views, consider features such as the use of highlight windows to avoid blocking winter solar access to your internal living areas.

> If you are locating your main internal and external living areas towards a view in the west or south-west direction, you should have some north facing glazing to a main living area elsewhere, along with a secondary outdoor area which will permit you to enjoy winter solar access.

- > Where possible, incorporate eave overhangs (at least 450mm) to admit winter sun while limiting the extent of direct solar load on walls and openings in summer. Deciduous trees and angled louvres can also be used to provide appropriate external shading.
- > Minimise or protect windows to the east and west, to reduce heat gain from the low morning and afternoon summer sun.
- > Ensure adequate external shading is provided with awnings, eaves, pergolas, shade sails or the use of shrubs and trees.

EXAMPLES OF SITE CONTOURS



Built form example featuring vaulted roof, use of site gradient for parking and storage beneath the house.



Example of lightly framed bush dwelling featuring extensive use of glazing steel water tank as a wall element. (Source: Richard Szklarz Architects)

SOLAR ACCESS



North-facing windows allow plenty of winter sunlight to warm the home naturally. (Source: Your Home Technical Manual)



Removable shade sails allow winter sun whilst providing protection from summer sun. (Source: Your Home Technical Manual)

SITE PARAMETERS AND PLANNING

VIEWS AND VISTAS

Many Avon Ridge homesites have dramatic scenic views and vistas across the hills and valleys. There are also more intimate views to be achieved within the bushland blocks.

Make the most of the opportunities for the very best views by:

- > Situating your home carefully within the building envelope to maximise your views from internal and external living areas, and to minimise the requirement for clearing.
- > Using the naturally undulating landscape.
- > Locating your home away from dense natural vegetation areas where possible.
- > Using natural vegetation to provide screening from your neighbour's building envelopes (It can also be a good wind break!).

MAINTAINING THE AVON RIDGE CHARACTER

Avon Ridge is located in a naturally beautiful and biodiverse environment. Peet is committed to retaining this environment to provide an opportunity for homeowners to live amongst established bushland whilst creating a sustainable and serviceable community.

BLACK COCKATOOS

Avon Ridge provides large areas of habitat for endangered Black Cockatoo species, including Carnaby's Black Cockatoo and Baudin's Black Cockatoo. These Black Cockatoos live only in south west Australia, however large-scale clearing for farming has fragmented much of their habitat. These Black Cockatoos have reduced in numbers by around 50% over the past 45 years and no longer breed in around a third of their previous breeding areas in the Wheatbelt.

The vulnerable Forest Red-tailed Black Cockatoo is also present in the area and is likely to use the site. This species is found to the north of Perth and east to North Bannister and the upper King River. Like Carnaby's and the Baudin's Black Cockatoo, the Forest Red-tailed Black Cockatoo nests in large hollows of Marri, Jarrah and Wandoo.

These Black Cockatoos move around the south west of Western Australia and forage on Banksia, Eucalyptus and Hakea species. Within Avon Ridge, Cockatoos feed on species such as Marri, Jarrah, Wandoo and Parrot Bush. Cockatoos can use the majority of the estate for foraging and their presence can be encouraged through revegetation and protection of existing vegetation.

EXAMPLES



Example of house siting to take advantage of Vistas



Example of single storey framed house sitting above the natural gradient with outdoor living area located to take advantage of views. (Source: Nordic Homes)



Views/Outlook

SITE PARAMETERS AND PLANNING

HABITAT TREES

Peet Limited is committed to retaining and protecting existing trees at Avon Ridge to provide breeding habitat for Black Cockatoo species in the future. Black Cockatoos breed in tree hollows of Marri, Jarrah and Wandoo and many species of tree take between 300 to 500 years to produce a natural tree hollow.

Landowners should be mindful of protecting these trees when selecting their building envelope, so that in the future they may provide homes for breeding endangered cockatoos. Additionally there are a number of larger trees with existing hollows which have been specifically identified as 'habitat trees' and will be specially protected through Memorials on Title.

NATIVE WILDLIFE

It is important to acknowledge the native wildlife at Avon Ridge and as a landowner you can undertake some precautionary measures to minimise the impact of building your new home on the native wildlife, including:

- > Avoiding feeding the native wildlife; especially birds.
- > Keeping watch for animals on the sides of roads or driveways, particularly at dusk and dawn when a lot of the native species will emerge.
- > Driving extra cautiously to avoid injuring animals.

In addition, no cats will be permitted as pets at Avon Ridge as they are one of the main predators of native animals in residential areas.

PRIORITY FLORA

Three priority flora have also been recorded at Avon Ridge including *Schoenus capillifolius*, *Rhodanthe pyrethrum* and *Hibbertia montana*. These species are considered to be poorly known species and the locations of these species will be protected within lots.

Additionally there are areas of Avon Ridge which have been recognised as containing high quality vegetation, that has been spared from disturbance. This vegetation is recognised as being in 'excellent' and 'pristine' condition and will be protected in its current condition.

EXAMPLES



The existing natural environment



Carnaby's Black Cockatoo
- *Calyptorhynchus latirostris* (Harewood)



Suitable Black Cockatoo habitat tree



Native wildlife at Avon Ridge (Harewood)



Suitable habitat for small animals



Bull Banksia - *Banksia grandis*

SITE PARAMETERS AND PLANNING

OUTBUILDINGS

Outbuildings, such as sheds, should be incorporated into the design of the house, to protect the character and aesthetics of Avon Ridge. They must be of materials and forms which match or are complementary to those of your home (the primary dwelling) and will need approval from Peet's representative and the City of Swan.

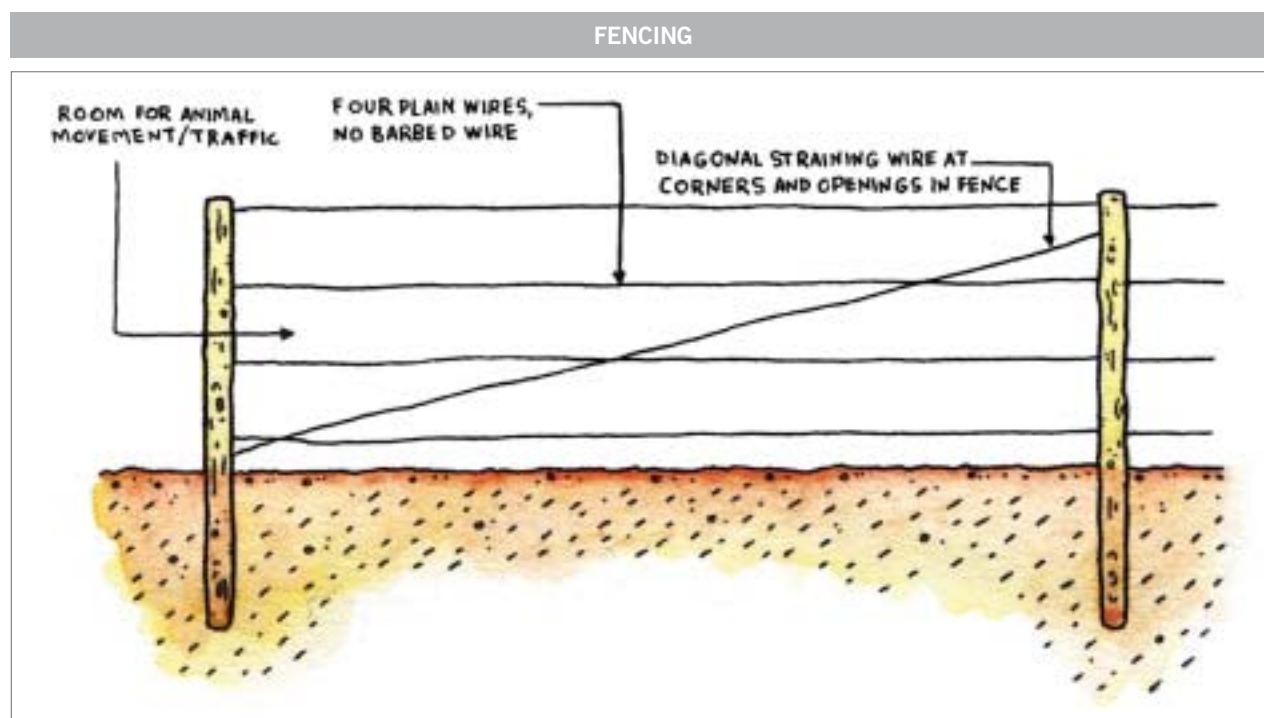
Any outbuildings are not for habitation, and are to be constructed simultaneously with your home, and not before.

FENCING

A uniform approach to fence design has been adopted to retain the rural character of Avon Ridge, minimise the visual impact on the natural landscape and allow for fauna movement through the community.

Post and wire fencing is provided (by Peet) for all lot boundaries. An entry gate will also be provided, located at the crossover as specified on your lot diagram as part of your Contract of Sale. An additional 1.2 metres high 'Ring Lock' fencing is also permitted around building envelopes and will be required if you have a dog, for example. Solid screening fencing of service and storage areas such as drying areas is permitted and the finish should be complementary to the home and outbuildings.

If you're using a Colorbond fence for this purpose, select from 'Riversand', 'Teatree', 'Hedge', 'Meadow', 'Willow', or 'Grey Ridge' - they are all appropriate colours for Avon Ridge's bush setting.



Fauna friendly fencing

SITE PARAMETERS AND PLANNING

DRIVEWAYS

Driveways need careful consideration and should be sensitively designed and constructed so they are functional in terms of accessing your home and minimising the risk of bushfire, while also having minimal visual impact.

In particular, driveways should:

- > Follow the natural lot contours, preferably in a curvilinear manner to minimise the need to cut, fill or clear the site. Straight driveways should be avoided wherever possible, but it will depend on clearing restrictions for your site.
- > Be softened with the use of appropriate landscape treatments including planting.
- > Be completed before or at the same time as your home and the builders access should be on the same route as the eventual driveway to prevent further degradation.
- > Be constructed with a material which is complementary in colour to the roads at Avon Ridge, or in other earthy colours which are consistent with the site context (the use of black asphalt or grey concrete for driveways is not considered appropriate for the rural setting).
- > Be engineered, particularly on steeply sloping lots, in order to effectively manage stormwater runoff while maintaining the integrity of the paved surface.
- > Be included in your 1,000sqm of clearing permitted within your lot.

EXAMPLES OF OUTDOOR LIVING



(Source: Richard Szklarz Architects)

SITE PARAMETERS AND PLANNING

YOUR AEROBIC TREATMENT UNIT (ATU) - WASTEWATER TREATMENT AND RECYCLING

Every Avon Ridge household is provided with an ATU for the treatment of wastewater. Make sure that your design provides for the installation of the ATU and its associated surface or sub-soil irrigation area.

The ATU installation, including the minimum area requirements for irrigation of wastewater and minimum setbacks from buildings, boundaries, swimming pools and watercourses etc, must be in accordance with State Government and City of Swan Health Department requirements.

The wastewater treatment and recycling system provided by Peet is the NovaClear™ system - a compact, single tank system that is lightweight and easily installed. It can provide 2,200 litres per day of 99.999% germ-free water!

The NovaClear™ system requires a minimum infiltration area of 150sqm which should be included within your 1,000sqm allowed for clearing. Furthermore, your lawn areas must be located within this infiltration area, and kept to a maximum of 75sqm (front and back i.e. half the infiltration area).

This wastewater system will allow the disposal of treated wastewater on gardens via subsoil leach drains. Suitable subsurface irrigation of wastewater will require imported amended soil medium that retains the high phosphorus levels found within wastewater. These soils will need to be replaced once the phosphorous retention capacity is exhausted. This will be part of the ongoing management of the NovaClear™ system through your service provider.

The City of Swan requires the NovaClear™ system to be located at least 1.2 metres away from any building or lot boundary and at least 1.8 metres from the irrigation area. Irrigation areas must be located at least 30 metres from any stream or creek line. The instalment of each NovaClear™ system must be individually approved by the City of Swan.

Planting around your ATU

You can plant within your infiltration area. Plants within these areas should be able to withstand a higher nutrient and chlorine level. Native species that are adapted to high nutrient conditions include:

> *Gahnia decomposita*.

> *Isolepis cyperoides*.

> *Juncus pallidus*.

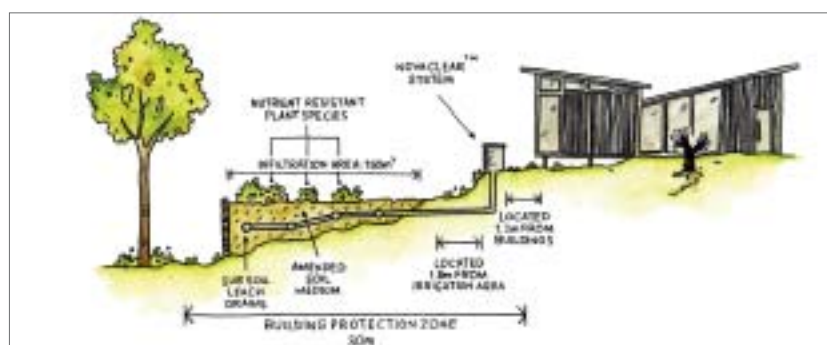
> *Lepidosperma longitudinal*.

> *Lepidosperma squamatum*.

> *Lepidosperma tetraquetrum*.

> *Taxandria linearifolia*.

For more advice on suitable plant species for the NovaClear™ irrigation area, speak to your local nursery. It is recommended that you construct a retaining wall around the external perimeter of the filtration area. This will assist in the management of the NovaClear™ system and provide a buffer between the native vegetation and any grass species used in the filtration area.



SITE PARAMETERS AND PLANNING

Operating and maintaining your ATU

Your responsibilities regarding the operation and maintenance of the NovaClear™ include:

- > Ensuring you have a continuous service agreement with a certified NovaClear™ service provider.
- > Reporting any alarms to the service provider.
- > Ensuring that only domestic waste is put into the system.
- > Ensuring that no unusually high volumes of chemicals or household cleaners are put into the system and that the products are used according to the manufacturer's specifications (including non-chlorine, biodegradable and non-toxic products).
- > Using less toxic cleaning solutions such as baking soda, vinegar or a mild soap solution.
- > Advising the service provider if the system power is to be switched off for any period, or if the system is not going to be used for a period longer than three months.

These and other important operational requirements are discussed in more detail in the NovaClear™ owner's manual which you would have been provided as part of your 'purchaser pack'.

ALTERNATIVE TREATMENT UNIT



(Source: Water Gurus)

DESIGNING YOUR SUSTAINABLE HOME AT AVON RIDGE

DESIGNING YOUR SUSTAINABLE HOME

All homes and related buildings at Avon Ridge should be in harmony with the natural character and charm of the entire community, and with your lot's natural landscape.

BUILDING HEIGHT

The maximum building height is two storeys and the height should not dominate the landscape or overly intrude into vistas. The use of split level designs which follow the natural contours on sloping sites is encouraged.

BUILDING TO SUIT SITE CONTOURS

Gradients within the building envelope may vary from gentle to pronounced, depending on the location of the lot. On lots with a gentle gradient it may be possible to consider the use of a concrete floor slab on the ground. This may entail the application of a sand pad up to 1.0 metre thick over the existing surface. In such instances the sand pad must be tapered off to the natural ground levels or, alternatively, terraced with discrete retaining walls and associated landscaping.

On moderately sloping sites, conditions may enable composite construction of slab on ground together with framed floors which sit above the ground where the lot levels fall away.

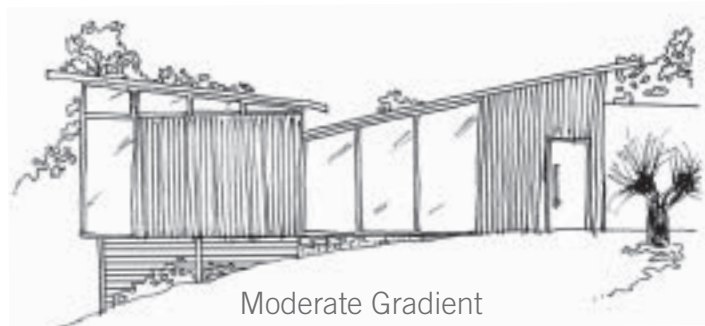
On lots with a more pronounced gradient, split level framed floors, which sit above but follow the ground contours, may be appropriate.

It is important to recognise that, depending on seasonal conditions, groundwater and stormwater runoff can impact on buildings. By incorporating framed floor construction which sits above the ground, the changing location and intensity of these water sources may be accommodated beneath the building.

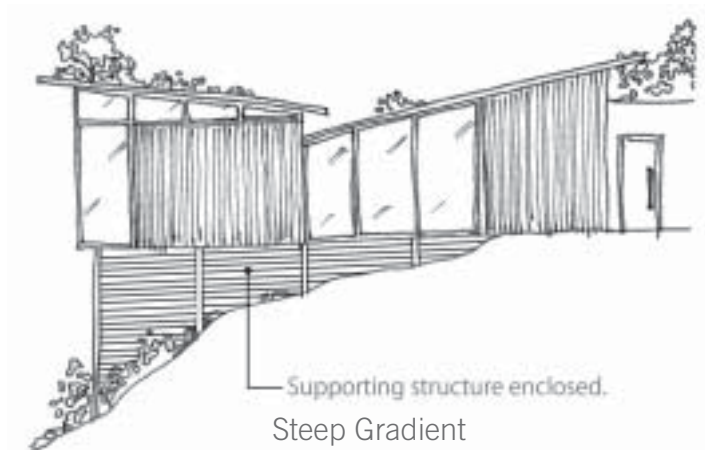
EXAMPLES OF SITE CONTOURS



Gentle Gradient



Moderate Gradient



Supporting structure enclosed.
Step Gradient

DESIGNING YOUR SUSTAINABLE HOME

BUILDING FORM

All homes at Avon Ridge should reflect a climate-responsive, bushfire-resistant design approach which respects the natural bush setting. Building construction and design is required to comply with AS 3959-2009 Construction of Buildings in Bushfire-prone Areas.

The impact on the natural environment can be mitigated by the sensitive siting of buildings and the incorporation of materials and finishes which complement the local textures and colours of earth, rock and bush.

Australia has a proud record of producing sophisticated contemporary bush dwellings, many of which draw inspiration from rudimentary corrugated iron shed structures which once dotted rural properties. A wide range of adaptations have reacquainted Australians with framed rural structures which sit gently in the landscape and feature a variety of roof forms from traditional hipped and gabled to mono-pitched skillions and even vaulted roofs. This style is encouraged at Avon Ridge.

BUILDING MATERIALS

EXTERNAL WALLS

The walls of your home and related outbuildings should be constructed of materials such as:

- > Face or rendered brickwork or blockwork.
- > Stone.
- > Rammed earth or mud bricks.
- > Lightweight cladding materials such as fibre cement, corrugated metal, bushfire resistant timber panels, weatherboards or other seamless, textured and/or coated wall cladding materials.
- > A composite of these finishes, which is very much encouraged.

It is recommended that a minimum of 50% of the external walls (by length) feature lightweight cladding.

Face brickwork or blockwork should be in earthy colours and tones which are compatible with the bush setting rather than creams or urban reds. Prefinished metal sheet cladding may be in Colorbond or Zinalume finish or other natural metals such as zinc or copper.

Where a framed house sits above the ground, it is recommended that the sub-floor area be enclosed with fire resistant cladding, to limit the potential for any burning embers (in the event of a bushfire) to penetrate under the building.

EXAMPLES OF BUILDING FORM



Craig Steere Architects

DESIGNING YOUR SUSTAINABLE HOME

ROOFS

ROOF FORMS

Roof forms within Avon Ridge are not restricted, however, the Standards Australia Handbook HB330-2009 Living in Bushfire-prone Areas, recommends an optimum roof pitch of around 22.5° because lower pitched roofs can allow embers to gather while steeply pitched roofs can contribute to the creation of wind eddies.

A diversity of roof forms is promoted within Avon Ridge, including hipped, gabled, skillion and vaulted roofs. Simple roof forms are preferred because complex forms can result in areas where combustible debris can accumulate and require ongoing maintenance.

Simple, clean roof lines can also contribute to the clear expression of the promoted architectural form.

For pitched roofs, a minimum eaves overhang of 450mm is required to mitigate against the effects of direct sunlight on walls and windows, and contribute to the character of the community. Exceptions include non-habitable rooms, covered external areas such as porticos, verandahs, terraces etc. and areas of concealed roof such as framed parapets.

ROOF MATERIALS

In keeping with the promoted rural bush character, and in order to promote consistency within Avon Ridge, all roofs are required to be clad in profiled sheet metal (i.e. 'custom orb' corrugated steel roofing or similar). Roof tiles, slate or shingles are not permitted.

Metal roof sheeting is to have low or neutral visual impact from the specified range of Colorbond colours or its equivalent, or Zinalume finish. Overly bright or dark, heat absorbing colours are not permitted. Natural metallic finishes such as Zinalume which oxidise over time and lose some of their reflectivity are considered appropriate to the rural bush context.

COLOUR

The use of colour will be a contributing factor to the successful integration of your home with the surrounding environment. Colour indicators should be derived from the natural elements of bushland, earth and scrub.

The intent is not to stifle expression, rather to provide compatible base colours which can be accentuated through the application of tonal variations and accent colours.

PREFERRED COLOUR PALETTE



COLORBOND OR EQUIVALENT FINISHES

PREFERRED COLOURS

- | | |
|--|-----------------|
| ✓ Natural Finishes: Zinalume, zinc or copper | |
| ✓ Windspray | ✓ Woodland Grey |
| ✓ Shale Grey | ✓ Jasper |
| ✓ Dune | ✓ Evening Haze |
| ✓ Bushland | ✓ Loft |
| ✓ Sandbank | ✓ Ironstone |
| ✓ Pale Eucalypt | ✓ Wilderness |

PROHIBITED COLOURS

- | | |
|-----------------|--|
| ✗ Surfmist | ✗ Headland |
| ✗ Deep Ocean | ✗ Monument |
| ✗ Cottage Green | ✗ Classic Cream |
| ✗ Manor Red | ✗ Overly bright or dark heat absorbing colours |

DESIGNING YOUR SUSTAINABLE HOME

TRANSPORTABLE, KIT AND RECYCLED HOMES

The use of transportable or kit homes is permitted provided they exhibit a level of detail which minimises the differentiation between them and site-built homes.

Suitable elements of detail include roofs or roofed terrace areas linking groupings of more than one transportable module, applied elements such as verandahs and other shading devices, attached roofed outdoor living areas, composites of external cladding materials.

Recycled or second hand homes must have external materials and finishes of the same standard expected of a new home, in accordance with these Avon Ridge Sustainable Living Guidelines.

GARAGES AND CARPORTS

Vehicles should be obscured from public view in order to preserve the quality of the 'streetscape'. This can be achieved by the orientation of the garage/carport, the provision of garage doors and by the provision of screening planting.

Structures for the accommodation of vehicles should be designed as an integral component of your home, whether attached or located as a separate structure.

Separate garage/carport structures must be constructed of materials and forms which match or are complementary to those of the home.

Garages which are integral with the dwelling and capable of being locked are preferred. Carports should incorporate screening so that vehicles are not visible from public spaces or neighbouring dwellings.

Parking areas for any boats, caravans and/or commercial vehicles must not be in front of the street building line and should incorporate screening from public spaces or neighbouring dwellings.

EXAMPLES OF ACCEPTABLE ROOF FORMS



EXAMPLE OF A BUILT-IN GARAGE



EXAMPLES OF BUILDING MATERIALS



External Walls



Rammed Earth



DESIGNING YOUR SUSTAINABLE HOME

ANCILLARY AREAS, UTILITY AND MECHANICAL EQUIPMENT

Service or storage areas such as drying or mechanical plant areas which have the potential to become untidy should be screened from public view.

Roof mounted air conditioning plant is to be coloured to match that of the roof and evaporative air conditioning is not allowed as it poses a bushfire risk. Storage tanks for solar hot water units should preferably be located remotely from the roof surface.

SUSTAINABLE DESIGN CRITERIA

Sustainable design is smart design. It involves designing your home to be responsive to local conditions (particularly climate and bushland), and building a more comfortable home that uses less water and energy, generates less waste and ultimately costs you less money to run!

Small decisions made at the design and construction phase can reap ongoing benefits and sustainable design can ultimately maximise the long-term value of your home at Avon Ridge and prepare you for any future changes to regulations.

Peet has developed a series of design outcomes which are intended to guide you towards a more sustainable home and lifestyle that is in harmony with the surrounding environment. They include:

- > Passive solar (energy efficient) design.
- > Reducing energy use and greenhouse gas emissions in the home.
- > Reducing potable water use, inside and outside the home.
- > Designing for life - adaptability and accessibility.
- > Minimising waste and improving recycling, during construction and occupancy.

EXAMPLES OF PREFABRICATED HOMES



Bach Kit Home



Nordic Homes

DESIGNING YOUR SUSTAINABLE HOME

Table 1: Essential sustainability elements

These sustainable design and construction criteria must be met to achieve building approval from Peet.

SUSTAINABILITY ELEMENT	DESIRED OUTCOME	DESIGN AND CONSTRUCTION CONSIDERATIONS
Housing design demonstrates good ventilation (i.e. windows and/or doors that open)	Good natural cross ventilation for all rooms	Clearly shown in final design (endorsed)
Installation of a 4,500L rainwater tank, connected to toilet, bathroom and/or laundry for internal use	Improved self-sufficiency for households. Conservation of water and reduced pressure on scheme/potable water supplies	Refer to page 26 for more detail on rainwater tanks
Installation of a NovaClear™ wastewater treatment and recycling system provided by Peet Limited	Reduced pressure on scheme/potable water supplies Reduced water wastage	Refer to page 11 for key considerations about wastewater treatment and recycling. Each household will need to obtain approval from the City of Swan.
Lawn area is kept to a maximum of 75sqm (front and back), Grassed areas must be located within the filtration area required by the NovaClear™ wastewater recycling and treatment system	Reduced pressure on scheme/potable water supplies. Reduced water wastage	Plans must clearly show the size and location of the filtration area nominated for the discharge of recycled wastewater. Refer to page 39 for more information on waterwise landscaping.
Waste associated with house construction is recovered for recycling	Reduce construction waste going to landfill Improved site cleanliness and appearance	Builders will be required to enter into a contract with the specialist waste recycling contractor appointed by Peet. Waste handling procedures will be covered in site inductions.
Provision of a 30L compost bin	Reduced amount of organic waste (food scraps and garden clippings) going to landfill. Provision of natural, organic soil improvers for home gardens	Nil.
Clearing is restricted to no more than that required for homes and fire management (maximum 1,000sqm)	Preservation of existing bushland and associated connection Maintenance of habitat for wildlife amenity and identity	Refer to Protective Covenants and to page i to find out more about clearing restrictions.

DESIGNING YOUR SUSTAINABLE HOME

ACHIEVING A SUSTAINABLE HOME DESIGN

'Design for life' principles embrace an approach to building design and construction which is safe, meets the needs of people across a range of abilities and ages, and is adaptable to the changing needs of users.

BUILD AN ENERGY EFFICIENT HOME

The average household in Perth generates around 12 tonnes of greenhouse gas emissions per year. This comes from the use of energy to heat and cool our homes, heat water and cook our food, car travel and also from emissions associated with waste breaking down in landfill.

The average daily consumption of energy is 17 units (kWh) per day, or around 6,200 units per year.

There are a number of design features and behaviours that can help you to minimise your energy use, save money and manage the impact of rising electricity prices and reduce your greenhouse gas emissions.

The design of your home at Avon Ridge must meet the 'Deemed to Satisfy' or 'Alternative Solution' energy management ratings of the Building Code of Australia (BCA), current at the time of submission for approval. Energy efficient design measures over and above BCA requirements are strongly encouraged to help minimise heating and cooling costs. This can be done by incorporating passive solar design principles when building your home.

Passive solar design refers to making use of natural heat from the sun and natural night-time cooling to keep your home at a comfortable temperature year round. Passive solar design can eliminate or reduce the need for expensive mechanical heating or cooling.

In addition to considering solar access and lot orientation (refer to page 6), the following passive solar design practices are recommended to improve the performance, comfort and value of your home.

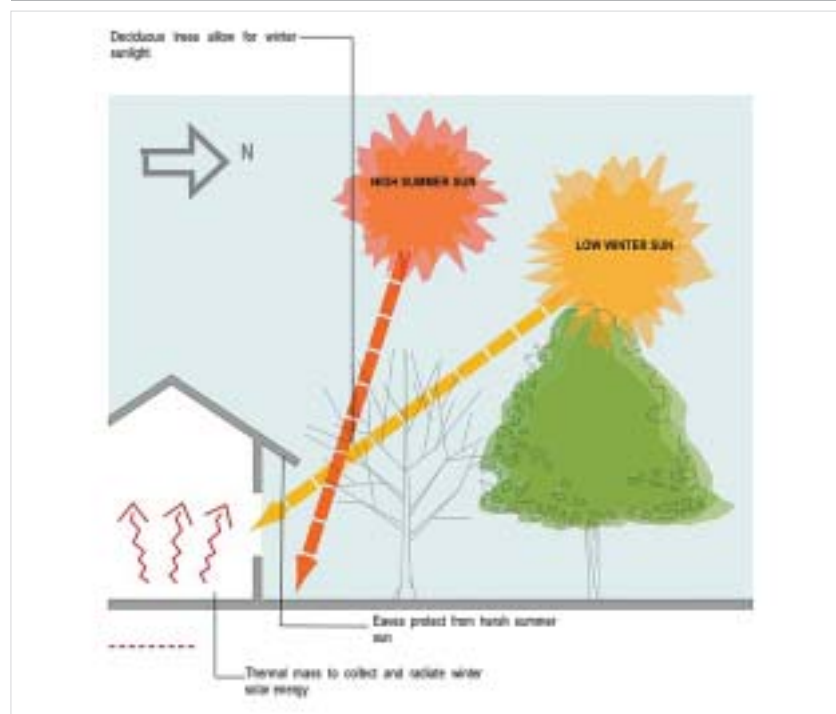
INCORPORATE THERMAL MASS

Thermal mass refers to any material (such as floors and walls) that can store heat from the sun during the day, and re-release it when required.

When effectively incorporated into the home, thermal mass can help to 'even out' day and night temperature variations.

Dense materials such as brick, stone, concrete and rammed earth heat up and cool down slowly - they have what is called a high 'thermal mass'. High thermal mass construction is ideal in Perth's climate.

THERMAL MASS CONSIDERATIONS



DESIGNING YOUR SUSTAINABLE HOME

When designing your home at Avon Ridge:

- > Locate thermal mass in living areas which are north facing for optimum results.
- > Ensure north-facing windows allow the sun to enter in winter so heat can be absorbed by walls and floors, (warming your home naturally). North-facing windows shaded by pergolas or patios will be less effective.
- > Ensure unwanted summer sun is kept out using internal and external shading devices, such as eaves, solar pergolas, awnings, blinds, curtains or other protection.

Thermal mass can also help keep your home cooler during the day in summer, provided you properly ventilate your home overnight. The aim is to allow the night air to cool down the mass inside your home, resulting in more comfortable conditions the following day.

Hard surfaces such as tiles allow the sun to heat the slab more readily than materials like timber, carpet or cork. Darker coloured tiles will absorb heat more effectively than lighter coloured tiles.

ENSURE GOOD CROSS VENTILATION

Benefits include:

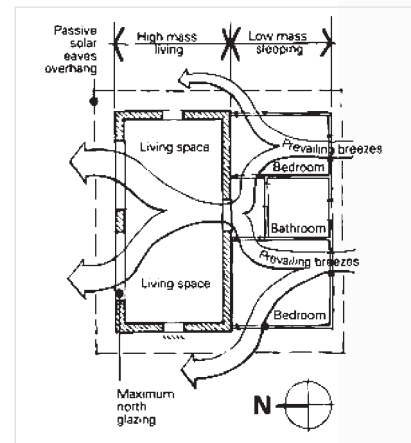
- > Natural cooling (less need for air conditioning) in summer with excess internal summer heat that might build up during the day 'flushed out' by cooling breezes.
- > Reduced level of dust, pollutant and chemicals.

To achieve good cross ventilation:

- > Consider a long, narrow home design.
- > Locate openings (such as windows and doors) on opposite sides of the home.
- > Minimise barriers to air paths through the dwellings.
- > Have a larger opening on the leeward side (the side that faces away from the direction of the wind) of the home to maximise the airflow through rooms.

You should also consider zone spaces (by incorporating doors between internal 'zones') to provide for maximum winter warmth and summer cooling by dividing living spaces and reducing the areas to be heated or cooled.

CROSS VENTILATION



Layout needs to allow for ease of cross ventilation. (Source: Your Home Technical Manual)

INSULATING YOUR HOME



Espaliered plants are an effective way to protect east and west walls. (Source: Sustainable Gardening Australia)

OUTDOOR AREAS



Solar accessible outdoor area.

DESIGNING YOUR SUSTAINABLE HOME

INSULATE YOUR HOME

Insulation is a Building Code requirement and acts as a barrier to heat flow, keeping your home warm in winter and cool in summer. The higher the R-Value of insulation, the greater its insulating effect. The minimum value required by the BCA is R2.7.

When building at Avon Ridge:

- > Consider installing a higher level of insulation that the minimum standard (ideally R3.5). You could reduce heat gains in summer and heat losses in winter by up to 35%.
- > Install thermal insulation with sufficient clearance and air ventilation around electrical fittings, particularly halogen down lights in roof spaces, in line with the relevant building standards. Halogens operate at high temperatures and are a fire hazard if they're unsafely installed too close to roof insulation.
- > Use sealed pelmets as well as floor-length curtains (made with a heavy fabric with insulating backing) or blinds to control heat flow according to the season and time of day.
- > Use foam insulation within the cavity space of double brick external walls (particularly on east and west sides) to help regulate internal temperatures in your home.

OUTDOOR AREAS

The combination of Perth's climate and the Avon Ridge environment mean you will have ample opportunity to make use of your outdoor living areas.

Please consider:

- > Locating outdoor living areas so they are directly accessible from an internal living area.
- > Positioning outdoor living areas on the north side to best facilitate winter solar access. Ideally, outdoor spaces on the north should be uncovered in winter to allow solar access and consider using removable shade devices like shade sails.
- > Restricting permanent coverings to outdoor areas to only a portion of north-facing glass, to maintain good solar passive principles.
- > Using landscape features to help maximise energy efficiency - plant deciduous trees and shrubs on the north side to allow winter sun but shade summer sun, and use landscaping to protect east and west walls.

FURTHER INFORMATION

As well as the information in these Sustainable Living Guidelines, a good general source of information on sustainable home design is the Your Home Technical Manual, produced by the Australian Government.

Information on solar passive and energy efficient design, in particular, is available at

www.yourhome.gov.au/technical/fs41.html and on the Sustainable Energy Development Office (SEDO) website:

www.sedo.energy.wa.gov.au

DESIGNING YOUR SUSTAINABLE HOME

DESIGNING YOUR GARDEN

When designing your garden consider the opportunities and constraints that your homesite presents. Gardens should be designed to take advantage of the site, including views, solar orientation and breezes. Shade and shelter create micro-climates in a garden to improve the amenity of the garden as well as improving growing conditions for plants.

When designing your garden, consider the following points:

- > Create a garden that enhances the immediate vicinity of the buildings, capturing cooling summer breezes or directing cooling breeze to entry ways and entertaining areas.
- > Design outdoor areas that flow from the internal spaces of your home.
- > Create easy access from main buildings to outbuildings (these should have clear edges to reduce hiding places for snakes and lizards).

> Assess all the aspects you would like to include in your garden design by comparing the cost of installation and maintenance with the rewards and benefits, as this will give you a good idea of what you are prepared to pay for, or what may not be suitable for your lifestyle.

> When selecting plants and materials in your immediate garden (flowering plants, paving, lawn etc) consider the origin of those materials and also consider how they will fit into the existing landscape characteristics at Avon Ridge.

> Consider the use of permeable surfaces that allow water to drain through them, rather than run off.

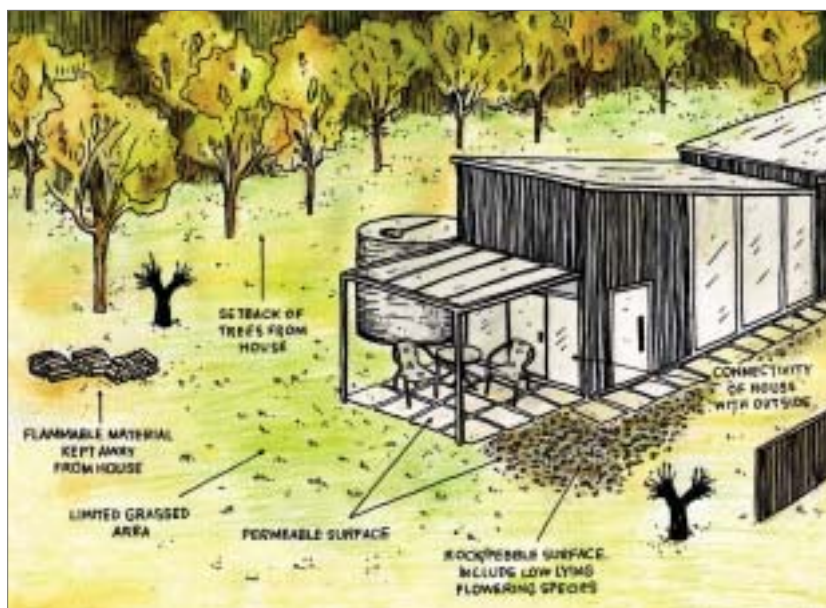
By planting trees of native species found within the local area, you will be reinforcing the natural environment beyond the edges of your homesite. This will also screen buildings from public roads and public view points. When planting shrubs, groundcovers and trees place them in clusters and arrange them irregularly so that the new planting does not appear as a plantation and the natural landscape character is kept.

USE SUSTAINABLE CONSTRUCTION MATERIALS

The type of materials you select to build and finish your home have a significant effect on the ongoing or lifecycle cost and environmental impact of the building. Using environmentally responsible construction materials is encouraged, where options are available and will not significantly jeopardise functionality or liveability.

The soils at Avon Ridge are well suited to a number of environmentally sustainable construction methods, particularly rammed earth construction and mud brick construction.

Rammed earth walls are constructed by ramming a mixture of selected aggregates, including gravel, sand, silt and a small amount of clay, into place between flat panels called formwork. Rammed earth is extremely durable, attractive and cost-comparable with other types of construction (depending on a range of factors such as size of house, complexity of design, how far soil has to be transported).



A well designed garden will improve the liveability of your home.

DESIGNING YOUR SUSTAINABLE HOME

Basic mud bricks are made by mixing earth with water, placing the mixture into moulds and drying the bricks in the open air. Mud bricks can also provide good structural capability, and generally have excellent fire and vermin resistance (since earth does not burn). Insulation is not intrinsic to either rammed earth or mud brick (a common misconception), and therefore needs to be added in the construction process.

If you are considering rammed earth or mud brick construction, be it for a feature wall, retaining wall or your whole house, it is important to get sound, specialised advice from builders with experience in these construction methods.

Consider selecting materials from environmentally responsible sources, including:

- > Plantation timber (e.g. plantation pine trusses and laminated veneer timber beams rather than hardwood rafters and structural beams).
- > Timber and wood products from credibly certified, well-managed forests and plantations or from verified recycled/reused sources. Ideally, choose wood certified by the Forest Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC).
- > Reused or recycled resources, such as materials like bricks, steel or aluminium containing recycled content.
- > Lower-embodied energy bricks (e.g. Eco-brick).
- > Concrete containing recycled aggregate or fly ash (e.g. for on-ground slab).
- > Recycled timber from credible sources (e.g. for flooring or indoor stairs).

Please also consider:

- > Reusing gravel from the site in construction in some way (e.g. rammed earth building, or for use in driveways/pathways).
- > Using low lifecycle energy materials (that is, materials that are not energy-intensive to produce, are locally available and durable, such as lightweight construction).
- > Using materials that are non-toxic and do not release toxic gases or dangerous particles (consider paints, 'engineered' wood products such as MDF, carpets).

FURTHER INFORMATION

If you have a particular type of wood in mind, then use the Greenpeace Good Wood Guide search:

www.goodwoodguide.org.au

The Good Wood Guide provides a rating for different species based on extensive research. Choose those products with the highest rating.

There are tools available which can help determine which materials are environmentally preferable.

Visit www.ecospecifier.org for a comprehensive rating tool across a range of building products and technologies.

EXAMPLES



Rammed Earth Home
(Source: Rammed Earth Constructions)



Mud Brick Home
(Source: Nillumbik Mudbrick Association)



DESIGNING YOUR SUSTAINABLE HOME

MAKE YOUR HOME ACCESSIBLE AND WELCOMING

Sustainability is not just about the environment - it is also about improving quality of life for everyone. Adopt Universal Design principles to make your house accessible and welcoming to everyone - people of all ages, levels of ability and mobility, health or lifestyle.

An accessible home means you won't have to move out if your health or mobility changes too! Universal design extends your time in your home, increases the value of your asset and the longevity of the house.

To make your home more accessible:

- > Provide at least one level entrance, and accessible paths and ramps.
- > Provide parking with suitable paving gradients and additional clear space.

> Use roll-out drawers and pantry cupboards in the kitchen - it provides easier access for people in wheelchairs.

> Ensure door handles, window operating hardware and tapware is easily operable (e.g. for people with arthritis).

> Design your bathrooms for easy adaptation (i.e. hobless shower, generous circulation spaces to enable future adaptation and reinforcement of bathroom walls to enable easy installation of grab-rails if required).

> Use slip resistant floor finishes.

> Ensure furnished living areas and bedrooms allow for adequate circulation space for a person using a wheelchair.

FURTHER INFORMATION

For more information about incorporating universal design principles into your home, visit the Australian Network for Universal Housing Design website: www.anuhd.org

UNIVERSAL DESIGN



Roll-out drawers provide ease of access. (Source: Universal Design Living Laboratory)



Lever door handles are easy to operate for people of all abilities. (Source: ehow.com)



Hobless shower. (Source: Sustainable-homes.org.au)

DESIGNING YOUR SUSTAINABLE HOME

MAKE YOUR HOME 'ADAPTABLE'

'Adaptable housing' refers to a flexibility of home design which will accommodate the varied and changing needs of the user with minimum disruption and cost.

Check if your home has:

- > A flexible space which can be used as a home office if required - at ground floor level, in a roof space or over a garage.
- > Sufficient internal cabling to allow access to technology, now or in the future.
- > An ability to accommodate universal access elements at a later stage (if not provided initially).
- > Sufficient flexibility to allow for a variety of furniture layouts and occupancy types such as family or rental, and to create new opportunities for conversion of different rooms and spaces over time.

CREATE HEALTHY, SAFE INDOOR LIVING SPACES

When designing and building your home, consider how you can create healthy, safe indoor living spaces by reducing and avoiding known allergens as much as possible and minimising the conditions in which they occur.

Many indoor allergens are now prevalent in the modern home, due to the types of products and materials we use. Indoor allergens include moulds and fungal spores, dust mites, fumes and gases, and volatile organic compounds (VOCs). VOCs are chemicals that evaporate at room temperature, and are known to be toxic and hazardous to human health. Products like adhesives, paints, treated timbers, carpets and furniture all give off VOCs that can trigger an allergic reaction (including asthma).

To help create a healthy home:

- > Use non-toxic or low toxic alternatives for materials and finishes (e.g. furniture, paints, floor coverings and glues). Note that carpets can easily become breeding grounds for mould and mites and therefore a trigger for asthmatics.
- > Provide adequate ventilation to help reduce the build up of allergens and toxins.
- > Minimise areas where dust can settle easily (e.g. ledges, exposed tops of cupboards, open shelves, skirting boards).

FIXTURES, FITTINGS AND APPLIANCES

Every home should be designed to minimise water consumption. Taps, toilets and showers are key areas where water consumption can be reduced by installing appropriate fittings.

Select low volume baths, basins, sinks and troughs, which can equate to reduced water usage and heating costs. All plumbing fittings must be water efficient and comply with the requirements of the Water Efficiency Labelling Scheme (WELS) star rating system. As a general rule, the more stars, the more water efficient the fitting.



YOUR NEW RAINWATER TANK

Peet will supply each home at Avon Ridge with a 4,500L rainwater tank (please note that terms and conditions apply).

Rainwater tanks must be connected for internal use (primarily clothes washing and/or toilet flushing). Using rainwater can reduce your water bills, allow greater household self-sufficiency and ease pressure on potable water sources.

PLAN AHEAD FOR RAINWATER HARVESTING

Homeowners (and your builders and designers) must make provisions for rainwater harvesting by ensuring there is:

- > A good site for your rainwater system, preferably near the appliances it will service.
- > A level, flat foundation, free of sharp objects and suitable for the 4,500L tank.
- > An external all weather-proof power point.
- > A copper cold water line from your toilet and washing machine to the outside wall just above your tank (this must also have the mains water line included as back-up).
- > A downpipe/s within two metres of the tank.

RAINWATER TANK EXAMPLE



Example of the rainwater tank provided to residents at Avon Ridge. (Source: West Coast Poly)

DESIGNING YOUR SUSTAINABLE HOME

AVON RIDGE BUILDING WASTE RECYCLING PROGRAM

Construction and Demolition waste makes up over half of all waste going to landfill in Perth. Much of this waste is made up of valuable resources such as bricks, wood, concrete, plastic and metals that can be reused or recovered for recycling.

At Avon Ridge, homebuilders are required to reuse and recycle discarded building material and minimise the amount of waste going to landfill. This will provide environmental benefits and will also provide you with a cleaner, tidier and safer site. The Avon Ridge Building Waste Recycling Program will be supported and managed by Peet, to ensure homebuilders will not be inconvenienced in any way.

Homebuilders will be required to work with Peet's preferred provider to separate the waste onsite, arrange collection in a timely manner and reprocess to produce new material. An individual waste management plan will be prepared for your home as part of this contract.

Different waste streams (e.g. wood, bricks, metal and plastic) will be separated on-site by builders, using clearly-labelled bins and bags. The separated waste will be collected by the recycling contractor and taken to an on-site facility. These materials will then be sent to material handling depots in the Perth Metropolitan Region.

The Recycling Program will be included in Peet's regular community sessions for purchasers at Avon Ridge, where you and your builder will have the opportunity to speak directly with the specialist contractor. Additional detailed information is available at the Avon Ridge Sales Office. Peet will appoint a dedicated contact person to receive any enquiries from builders about the recycling program.

SITE MANAGEMENT DURING CONSTRUCTION

Managing site construction to minimise disturbance usually requires little effort and helps to maintain the existing natural environment, as well as reduced disturbance to neighbouring sites.

Considerations:

- > Minimise the potential for dust or rubbish intrusion into neighbouring properties by watering down or through the use of screening (such as hessian or shade cloth clad fencing).
- > Retain stormwater on site to reduce the extent of water borne contaminants being deposited into waterways.
- > Prevent sand, soil, cement and other building materials from polluting waterways. Use barriers to filter coarse sediment at all points where stormwater leaves the site.
- > Use only a single vehicle access point.

NOT ACCEPTABLE



Typical building site with poorly managed waste. (Source: EarthCare Recycling)

ACCEPTABLE



Tidy building site using EarthCare bins.

DESIGNING YOUR SUSTAINABLE HOME

BE A GOOD NEIGHBOUR DURING CONSTRUCTION

Managing site construction to minimise disturbance usually requires little effort and helps to maintain a healthy surrounding environment - and is all part of being a good neighbour.

Please:

- > Minimise the potential for dust or rubbish intrusion into neighbouring properties by watering down the site, or through the use of screening (such as hessian or shade cloth clad fencing).
- > Retain stormwater on site to reduce the extent of water borne contaminants being deposited into waterways.
- > Prevent sand, soil, cement and other building materials from polluting waterways. Use barriers to filter coarse sediment at all points where stormwater leaves the site.
- > Use only a single vehicle access point.

FURTHER INFORMATION

Further information about construction waste management and recycling can be found in the Master Builders Association Commercial Construction Waste Management Guide:

<http://www.mbawa.com/site/files/57576/Waste%20Management%20Guide%2008-04-01.pdf>

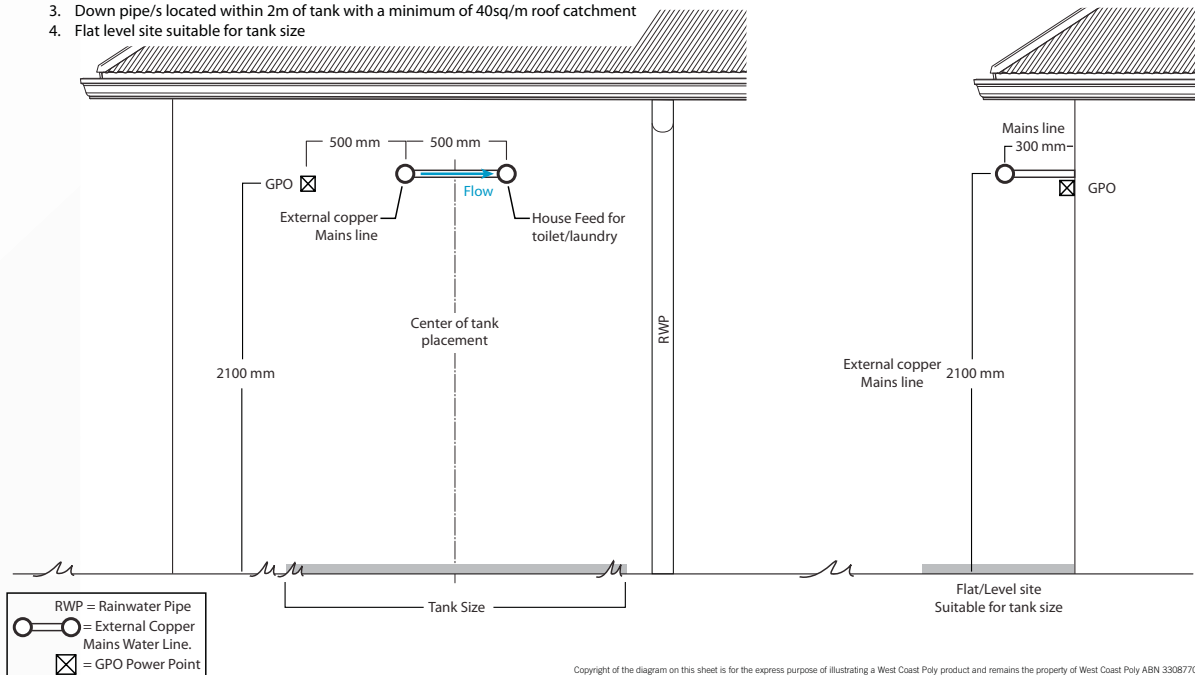
Builders.

Provisions required for Automatic Rainwater System.



Builders requirements during construction stage:

1. External copper (19mm) mains water line for water switch control (elevation as indicated)
2. Weather proof GPO power point (elevation as indicated)
3. Down pipe/s located within 2m of tank with a minimum of 40sq/m roof catchment
4. Flat level site suitable for tank size



Provisions required for Automatic Rainwater Systems. (Source: West Coast Poly)

SUSTAINABLE BUSHLAND LIVING

EVERYTHING YOU NEED TO KNOW
ABOUT SUSTAINABLE BUSHLAND LIVING
ONCE YOU HAVE MOVED INTO YOUR
NEW HOME

SUSTAINABLE BUSHLAND LIVING

BUSHLAND LIFESTYLE AND RECREATION

Living in special bushland areas, seemingly small 'everyday' activities can have an adverse, often unintended, impact on the surrounding environment.

There are a number of things Avon Ridge residents can do to maintain a harmonious relationship with the surrounding environment, including:

- > Considering the impact of your recreation activities and aim to avoid disturbing the natural environment as much as possible. For example, when out bushwalking, keep to the paths so you do not trample the vegetation or banks along creeklines.
- > Avoiding motorbike riding or four-wheel driving through bushland areas.
- > Avoiding picking wildflowers - they will provide seeds for future plants.
- > Picking up dog droppings, they add nutrients to the ground and encourage weed growth.
- > Avoiding the removal of logs on the ground for firewood, or rocks for landscaping, as they form an essential habitat for reptiles and many invertebrates including termites.

EXAMPLES



Residents enjoying the lifestyle that Avon Ridge has to offer.

SUSTAINABLE BUSHLAND LIVING

BEING WATERWISE IN YOUR HOME

The following practices are recommended to further optimise water efficiency once you move in to your new home:

- > Run your dishwashers and washing machines only when full (4 star rated dishwashers can use up to 15 L/wash/day - approximately 5,000L per year).
- > Don't let water run while cleaning your teeth or washing your hands (potential saving of around 14,000L per year).
- > Aim to take shorter showers (e.g. from eight minutes to four minutes). Installing a four-minute shower timer can help here - and overall reduce your water use by 13,000L.
- > Fix leaky toilets or taps immediately - this could potentially save up to 9,000L of water per year.

Figures sourced from Department of Transport DPI Living Smart Report 2008. (<http://www.dpi.wa.gov.au/livingsmart/15723.asp>)

FURTHER INFORMATION

For information about being waterwise in the garden, see Waterwise Landscaping on page 39 of these Sustainable Living Guidelines.

Information on being waterwise in the home is also available on the Water Corporation website: www.watercorporation.com.au

SAVING ENERGY AND MINIMISING GREENHOUSE GAS EMISSIONS IN YOUR HOME

The following practices are recommended to further optimise energy efficiency and reduce greenhouse gas emissions once you move in to your new home:

HOT WATER USE

Water heating can account for up to a third of energy used in the home.

Considerations:

- > Ensure the hot water system is sized according to the number of people in the home.
- > For solar hot water systems, only turn the booster on when required - in cloudy and winter conditions. Boosting is rarely required in summer.
- > Should a roof-mounted storage system be used, the tank must be integrated to match the roof colour and profile. Always locate hot water systems to minimise visual impact from neighbours and the street view, wherever possible.

EXAMPLE



(Source: Sustainable Energy Development Office)

SUSTAINABLE BUSHLAND LIVING

HEATING AND COOLING

Heating and cooling is the other major contributor to energy use in the home (over 25%). Incorporating good passive solar design can, however, greatly reduce the need for mechanical heating and cooling.

Considerations:

- > Consider whether you need air conditioning at all, look at using climate responsive design with good ventilation to naturally cool and warm your home. Ceiling mounted or portable electric fans provide direct cooling with very low running costs. Ensure ceilings are high enough to accommodate ceiling fans.
- > If you are installing an air conditioner, it must not be evaporative to reduce fire hazard. Consider also selecting a system with a high energy star rating - ideally a minimum of 4 stars and ensure it permits separate control of the living and sleeping areas, so you are not cooling unused rooms during the day.
- > Select energy efficient gas and electric heating appliances - the more stars, the more energy efficient.

FIXTURES, FITTINGS AND APPLIANCES

Ongoing running costs can easily exceed the original purchase price of an appliance, so consider the full lifetime cost when choosing an appliance.

LIGHTING

Smart use of lighting is an easy way to cut back on energy use. Halogen downlights have become a popular inclusion in home lighting in recent years, however halogen lamps generate a large amount of heat and generally don't have a long lifespan like fluorescent lamps. 'Low voltage' halogen downlights are not low energy consumers - halogen lights turn 80% of power they use into heat, using only 20% to make light.

The Australian Government will implement a phase-out of inefficient incandescent light bulbs by introducing Minimum Energy Performance Standards (MEPS) for lighting products. The least efficient halogen lights will be phased out, though halogens will continue to be available.

Considerations:

- > Avoid using halogen lighting for general room lighting. Halogen lights are designed for 'task' lighting (e.g. bench-tops or pictures), but are an expensive option for general room lighting.
- > Use LEDs as a highly energy-efficiency alternative to halogen downlights - they use a fraction of the energy and can last up to 15 years. Whilst there is an associated upfront cost, this will be recouped quickly through lower energy bills.
- > Avoid having several lights activated by one switch - use separate switches for each light.



LEDs are an energy efficient alternative to halogen downlights
(Source: Today)

Compact Fluorescent Lamp (CFL)



SUSTAINABLE BUSHLAND LIVING

WHITE GOODS

The use of large appliances like fridges and freezers, dishwashers, clothes washers and clothes dryers collectively contribute to over a quarter of your energy use.

Refrigeration can be a significant source of household energy use - because the fridge or freezer usually runs all day every day.

Considerations:

- > When purchasing new white goods, select one that is the right size for your needs, with a high energy efficiency rating (above 3.5 stars).
- > Set your fridge thermostat between 3°C and 4°C and your freezer thermostat to between -15°C to -18°C.
- > If you have more than one fridge, switch the additional one off when not needed.
- > Install a clothes line (taking into account maximum solar benefit and privacy and screening issues) and avoid using electric clothes dryers.
- > Use cold water for clothes washing as much as possible.

STANDBY POWER

Standby power is about 10% of the typical household energy bill (as high as 25% in some cases) and is another easy target for reducing energy use around the home. Most of the energy used by appliances on standby is wasted.

Considerations:

- > Locate power switches at easy-to-reach heights to enable you to easily switch off equipment at the power point. This is also an important feature of universal access design (see 'Design for Life').
- > Switch off the following electronic equipment at the power point when not in use:
 - stereo, television, games consoles, set top boxes, microwave, washing machine, mobile phone chargers, air conditioners, room heaters.
- > **Do not** turn off equipment like security systems, smoke alarms and time controlled equipment like reticulation systems.

BUYING LOCAL

'Food miles' (how far produce travels to the shops) and farming methods (especially fertiliser use) are responsible for a large proportion of greenhouse gas emissions. Therefore, the choices you make when you go shopping can have an important impact on the energy used to make and transport items to shops.

Considerations:

- > Buy only locally grown fruit and vegetables and eat seasonal produce, which is more likely to be locally produced (and tastes better).
- > Grow your own vegetables, fruit and herbs in the garden.
- > Choose certified organic foods wherever possible, which are grown without artificial pesticides and herbicides and therefore reduce greenhouse gas emissions.



Standby switch
(Source: Office of Energy, WA)

SUSTAINABLE BUSHLAND LIVING

OUTDOORS

Consider how you can reduce energy use associated with outdoor activities.

Considerations:

-
- > Put timers on pump-driven reticulation systems.
-
- > If you have a pool, use a timer on your pool pump and reduce its operating time over winter.
-
- > Grow deciduous trees or vines on the north side of the home to allow winter sun to filter through while providing summer shading.
-
- > Aim to minimise the requirement for energy-hungry garden tools - like lawnmowers, leaf blowers and other electrical equipment.
-

USING RENEWABLE ENERGY

Most of Western Australia's energy comes from coal or gas fired generators that produce large amounts of greenhouse gases. Using renewable energy to meet some or all of your energy needs is an excellent way to reduce the cost of energy use and reduce your household's greenhouse gas emissions.

Considerations:

-
- > Consider installing a photovoltaic (PV) or wind-power system to supply your own energy. A PV system converts sunlight into electricity - allowing you to generate power whenever the sun shines. Government financial assistance is available via the Solar Credits Program.
-
- > Switch to Synergy's accredited green power option, Natural Power (25%, 50%, 75% or 100% options are available). Energy is supplied as per usual, however Synergy buys more renewable energy on your behalf. Essentially, the more Natural Power sold, the greater the demand for renewable energy will be, stimulating further investment in WA renewable energy generation for the future.
-



Solar PV system generating power from the sun
(Source: Sustainable Mandurah Home)

SUSTAINABLE BUSHLAND LIVING

SAVE THE ENVIRONMENT - AND YOUR MONEY!

By making a range of simple changes outlined in these Sustainable Living Guidelines, you can potentially achieve the following savings:

PRACTICE	ESTIMATED SAVING (PER YEAR)		
	ENERGY (KWH)	GREENHOUSE EMISSIONS (CO ²)	COST (\$)
Using fan to cool house instead of air conditioner	406 kWh	380 kg	\$57
Replace five 50W halogen downlights with LED downlights	386 kWh	362 kg	\$54
Install 10 20W compact fluorescent globes in place of 10 75W incandescent globes	803 kWh	750 kg	\$110
Turning off second fridge (bar fridge)	296 kWh	277 kg	\$41
Using cold water in washing machine instead of hot	137 kWh	128 kg	\$20
Adjusting fridge/freezer thermostat (note: savings represent each 1°C adjustment)	27 kWh	25 kg	\$4
Adjusting air conditioner thermostat (note: savings represent each 1°C adjustment)	35 kWh	33 kg	\$5
Switch to 100% NaturalPower (based on average household use of 17 kWh / day)	6,205 kWh	5.8 tonnes	Costs slightly increased

Source: Department of Transport DPI Living Smart Report (2008). Available online at: <http://www.dpi.wa.gov.au/livingsmart/15723.asp>

FURTHER INFORMATION

Information on reducing energy use in the home can be found at the Australian Conservation Foundation's Green Home website: www.acfonline.org.au and click on the 'Green Home' icon.

Information on Synergy's GreenPower program can be found at: www.synergy.net.au and follow the Green Energy links.

For more information on the Australian Governments incentives to install renewable energy, visit: www.environment.gov.au/settlements/renewable/pv/index.html

*All figures sourced throughout this section are from Department of Transport DPI Living Smart Report 2008 (<http://www.dpi.wa.gov.au/livingsmart/15723.asp>)

SUSTAINABLE BUSHLAND LIVING

REDUCE YOUR WASTE AT AVON RIDGE

Reducing, reusing and recycling waste helps to minimise pollution and greenhouse gas emissions, ease pressure on landfill sites and conserve natural resources. It also helps to create markets for recycled products and materials, by reducing demand for new materials.

The average Western Australian household throws out around 15.7 kilograms of rubbish every week. Some of this is composted or recycled but most ends up in landfill.

Waste minimisation within the household is strongly encouraged at Avon Ridge, particularly the source separation and storage of recyclable materials, and the reuse of organic wastes.

To help make it easier for Avon Ridge residents, Peet is providing every household with a free compost bin. Make sure you have appropriate space in your home to separate recyclable and compostable waste from non-recyclables. You might, for example, have separate bins in the kitchen for recyclable waste, organic waste and non-recyclable waste.

Putting just 20% less in the rubbish bin can save 100kg of greenhouse gas from the waste disposal process each year.



REDUCING

- > Buy only what you need. Every item that we buy takes resources to make and creates waste at the end of its life.
- > Consider buying second-hand from places that support and encourage recycling, or perhaps borrowing from a neighbour or friend - sharing resources is a great way to cut down on unnecessary waste.
- > Avoid disposable products as much as possible.
- > Choose products made from recycled materials and products packaged in material that can be recycled.

REUSING

- > Buy products which are available in refillable or reusable packs or shop where containers can be refilled or returned.
- > Say 'no thank you' to plastic bags - use a canvas shopping tote or string bag every time you go shopping.
- > Consider whether goods can be repaired rather than replaced.
- > Donate unwanted clothing, furniture and white goods to charities.
- > Use glass bottles and jars, plastic bags, aluminium foil and take away food containers over and over again before recycling or disposing of them.



SUSTAINABLE BUSHLAND LIVING

RECYCLING

After you have avoided, reduced and/or reused, recycle materials like paper, plastic, glass and metal through the City of Swan kerbside recycling service, and recycle your food scraps using a composting system.

> Set up your compost bin to recycle food scraps and green waste. Household waste such as food scraps, weeds, lawn clippings, leaves and garden prunings can be recycled and turned into compost.

> Place the following items in your yellow-topped recycling bin:

- clean glass bottles and jars (lids removed);
- aluminium cans, clean foil and trays;
- steel food cans (rinsed clean);
- clear plastic cool drink bottles coded 1 (rinsed);
- plastic milk bottles coded 2 (rinsed); and
- paper and cardboard such as newspaper, junk-mail, office paper.

> Never put dangerous materials such as syringes, chemicals or gas bottles out for recycling.

FURTHER INFORMATION

Information on minimising waste in general can be found at the Zero Waste WA website:

www.zerowastewa.com.au

Information about how to recycle a range of other household items not included in the yellow recycling bin, from car tyres to old reading glasses, visit Planet Ark's 'Recycling Near You' website:

www.recyclingnearyou.com.au/

COMPOSTING



Compost bin

SUSTAINABLE BUSHLAND LIVING

WORKS REVEGETATION

Peet Limited will undertake extensive revegetation within road reserves, existing cleared areas, within lots and the adjacent Parks and Recreation Reserve. This revegetation will include locally native species, including species which provide foraging and breeding habitats for fauna, including Carnaby's Black Cockatoo and Baudin's Black Cockatoo.

At Avon Ridge, 214,000 seedlings will be planted and landowners will be provided with seedlings to complement the existing vegetation within lots. Peet will engage contractors to install the seedlings, to ensure that they are planted in the correct locations and to help ensure their survival. The following plants will be used for revegetation.

Topsoil and plant mulch will also be recovered from the development, which contains a natural seedbank for the plants found over the estate. The topsoil and plant mulch will be used for landscaping road reserves and public open space areas.

COMMON NAME	SPECIES NAME
Sheoak	<i>Acacia fraseriana</i>
	<i>Acacia humilis</i>
Panjang	<i>Acacia lasiocarpa</i>
Orange Wattle	<i>Acacia saligna</i>
Basket Flower	<i>Adenanthos obovatus</i>
Kangaroo paw	<i>Anigozanthos manglesii</i>
Bull Banksia	<i>Banksia grandis</i>
Holly-leaved Banksia	<i>Banksia ilicifolia</i>
Porcupine Banksia	<i>Banksia lindleyana</i>
Honeypot Banksia	<i>Banksia nivea</i>
Hawkeswood	<i>Calothamnus hirsutus</i>
One-sided Bottlebrush	<i>Calothamnus quadrifidus</i>
Yellow Star-Flower	<i>Calytrix angulata</i>
	<i>Calytrix glutinosa</i>
Bristly Cottonhead	<i>Conostylis setigera</i>
Marri	<i>Corymbia calophylla</i>
Prickly Bitter Pea	<i>Daviesia decurrens</i>
Mottlecah	<i>Eucalyptus macrocarpa</i>
Jarrah	<i>Eucalyptus marginata</i>
Wandoo	<i>Eucalyptus wandoo</i>
York Road Poison	<i>Gastrolobium calycinum</i>
	<i>Gastrolobium dilatatum</i>
Hairy Yellow Pea	<i>Gompholobium tomentosum</i>
Fuchsia Grevillea	<i>Grevillea bipinnatifida</i>

COMMON NAME	SPECIES NAME
	<i>Grevillea crithmifolia</i>
Native fuchsia	<i>Grevillea wilsonii</i>
Curved Fruit Hakea	<i>Hakea cyclocarpa</i>
Golfball or Marble Hakea	<i>Hakea incrassata</i>
Honeybush	<i>Hakea lissocarpa</i>
Candle Hakea	<i>Hakea ruscifolia</i>
Wavy-leaved Hakea	<i>Hakea undulata</i>
Yellow Buttercups	<i>Hibbertia hypericoides</i>
	<i>Hibbertia subvaginata</i>
White myrtle	<i>Hypocalymma angustifolium</i>
Swan River Myrtle	<i>Hypocalymma robustum</i>
Coral Vine	<i>Kennedia coccinea</i>
Scarlet Runner	<i>Kennedia prostrata</i>
Roadside Tea-tree	<i>Leptospermum erubescens</i>
	<i>Leucopogon propinquus</i>
Zamia	<i>Macrozamia riedlei</i>
Christmas Tree	<i>Nuytsia floribunda</i>
Snottygobble	<i>Persoonia longifolia</i>
Pixie mops	<i>Petrophile linearis</i>
False Boronia	<i>Phyllanthus calycinus</i>
	<i>Verticordia acerosa</i> var. <i>acerosa</i>
Grass Tree	<i>Xanthorrhoea preissii</i>

SUSTAINABLE BUSHLAND LIVING

WATERWISE LANDSCAPING

An environmentally conscious garden is not only one that creates a habitat for native animals, but also uses water wisely.

To help achieve waterwise landscaping outcomes, Avon Ridge residents will be required to ensure that:

- > Lawn area is kept to a maximum of 75sqm (front and back) and is to be irrigated only by water from the NovaClear™ wastewater recycling and treatment system (see 'Wastewater recycling on page 11). No scheme water is to be used to irrigate lawns. This can be demonstrated by clearly showing the size and location of lawn infiltration areas on your design that is submitted to Peet for approval. Turfed species used should be tolerant to high levels of water.
- > Should you decide not to include any lawn in your landscape design, then you need to clearly show on your plans the designated irrigation area from the wastewater recycling system.

The types of plants that you use in your garden will inform how often and how long you water for. Generally, planting locally native plants ensures that those plants are suited to the rainfall and soil conditions of the Brigadoon area.

There are numerous other ways to reduce water use in your garden, including:

- > Minimising lawn areas that require a lot of water and also lose a lot of water through evaporation.
- > Ensuring a rain-sensitive-override-switch is fitted to your irrigation system so you are not wasting water on rainy days.
- > Using waterwise plants that do not require a lot of watering to survive or thrive (see a suggested list on page 38).
- > Reducing the size of garden beds that require irrigation.
- > Mulching garden beds to reduce evaporation from soil.
- > Using more waterwise irrigation methods, particularly bubbler and dripline systems. Bubbler irrigation applies water directly to root zones of plants that require watering. Dripline irrigation reduces evaporation most efficiently but is more difficult to direct onto plants that need it, while spray irrigation is the least efficient method of watering as it evaporates quickly.
- > Fixing dripping taps quickly.

FURTHER INFORMATION

The Water Corporation has developed guidelines regarding the design, construction and maintenance of waterwise gardens. These guidelines can be accessed at www.watercorporation.com.au or call 13 10 30 to contact a waterwise specialist near you.

SUSTAINABLE BUSHLAND LIVING

MINIMISING INVASIVE PLANTS

It is encouraged to plant as many native plants as possible in your garden.

Native plants support fauna and help to minimise the spread of invasive plants.

A number of household plant species can be detrimental to the native vegetation if they escape from your garden. These have become known as environmental weeds, plants that compete with the native vegetation and have subsequent impacts on the native fauna and on the fire management regime.

One generic plant that can very easily spread in native bushland is grass.

Grassed areas within your lot will be kept to a minimum to ensure the retention of native vegetation. However it is important to ensure these species do not spread into the native bushland. This can be achieved through using a barrier around the perimeter of grassed areas such as a retaining wall or rocks. When you mow your grassed area ensure that you dispose of the clippings wisely. A good place to dispose clippings is your compost bin.

The following plants have been listed as environmental weeds in the Avon Ridge region.

*This list is in no manner exhaustive. These species indicate the environmental weeds that currently pose the most threat to the Avon Ridge region.

COMMON NAME	SPECIES NAME
Bridal Creeper	<i>Asparagus asparagoides</i>
African Corn Flag	<i>Chasmanthe floribunda</i>
Black Flag	<i>Ferraria crispera</i>
Long Tubed Painted Lady	<i>Gladiolus angustus</i>
Pink Gladiolus	<i>Gladiolus caryophyllaceus</i>
Painted Lady, Wavy Gladiolus	<i>Gladiolus undulatus</i>
Soldiers	<i>Lachenalia aloides</i>
Yellow Soldier	<i>Lachenalia reflexa</i>
One Leaf Cape Tulip	<i>Moraea flaccida</i>
Bugle Watsonia	<i>Watsonia meriana</i>
Bulbil Watsonia	<i>Watsonia meriana</i> var. <i>Bulbillifera</i>
Arum Lily	<i>Zantedeschia aethiopica</i>
Patersons Curse	<i>Echium plantagineum</i>
Century Plant	<i>Agave Americana</i>
Fennel	<i>Foeniculum vulgare</i>
Sea Lavender	<i>Limonium companyonis</i>
Rose Pelargonium	<i>Pelargonium capitatum</i>
Typha	<i>Typha orientalis</i>
Cootamundra Wattle	<i>Acacia baileyana</i>
Sydney Golden Wattle	<i>Acacia longifolia</i>
Tasmanian Bluegum	<i>Eucalyptus globules</i>
Sydney Bluegum	<i>Eucalyptus saligna</i>
Spotted Gum	<i>Eucalyptus maculata/Corymbia maculata</i>
Victorian Tea Tree	<i>Leptospermum laevigatum</i>
Castor Oil Plant	<i>Ricinus communis</i>
Willow	<i>Salix babylonica</i>
Radiata Pine	<i>Pinus radiata</i>
Olive	<i>Olea europaea</i>
Kangaroo Apple	<i>Solanum aviculare</i>
Brazilian Pepper	<i>Schinus terebinthifolius</i>

EXAMPLES OF INVASIVE PLANTS



Stdnet Golden Wattle - *Acacia longifolia*
(Colin Bower, Floraphoto)



Castor Oil Plant - *Ricinus communis*
(Colin Bower, Floraphoto)

SUSTAINABLE BUSHLAND LIVING

RECOMMENDED PLANT LIST

We have gathered a list of plants that would be suitable and can be recommended for use at Avon Ridge. By selecting plants from this list you can achieve points as outlined further in this document.

Peet encourages land owners to plant species that are native to Brigadoon region.

COMMON NAME	SCIENTIFIC NAME	COMMENTS	HABITAT FOR BLACK COCKATOO SPECIES		
			NESTING	ROOSTING	FEEDING
TREES					
Marri	<i>Corymbia calophylla</i>	With large gumnuts, this locally native tree can provide shade and added environmental value by providing habitat and foraging opportunities for animals and insects.	X	X	X
Jarrah	<i>Eucalyptus marginata</i>	Known for its timber, this tree is tall and slender and by planting this locally native tree it will supplement the existing vegetation at Brigadoon.		X	X
Banksia	Local native Banksia's include <i>Banksia grandis</i> , <i>Banksia ilicifolia</i> , <i>Banksia lindleyana</i> and <i>Banksia nivea</i>	A broad variety of Banksia are suitable within this area.			
Eucalypt Trees	Eg. <i>Eucalyptus wandoo</i>	A variety of other Eucalypts can provide shade, flowers, fauna habitat and feeding opportunities.	X	X	X

SUSTAINABLE BUSHLAND LIVING

RECOMMENDED PLANT LIST CONTINUED...

COMMON NAME	SCIENTIFIC NAME	COMMENTS	HABITAT FOR BLACK COCKATOO SPECIES		
			NESTING	ROOSTING	FEEDING
SHRUBS					
Grevillea	<i>Grevillea bipinnatifida</i> and <i>Grevillea wilsonii</i>	Some varieties are perfect for screening, whereas others are appropriate for colourful gardens. They are all bird attracting and available in a variety of heights, colours and forms.			
Hakea	<i>Hakea cyclocarpa</i> , <i>Hakea incrassata</i> , <i>Hakea lissocarpa</i> , <i>Hakea ruscifolia</i> and <i>Hakea undulata</i>	Great bird attracting plants and trees available in a variety of heights and colours.		X	
Acacia	Local native Acacia's include <i>Acacia lasiocarpa</i> and <i>Acacia saligna</i>	Wattles are great showy plants, but be aware that some varieties can take over your garden, especially Eastern States varieties.		X	
Kangaroo Paw	<i>Anigozanthos</i> sp.	A variety of height, colour and flowering times, this plant will suit the local environment. But be warned that kangaroos can find them very tasty.			
Woolly Bush	<i>Adenanthos cygnorum</i>	Is a great variety for screening, and also available as a small bush. Can be hedged to create a formal shape.			

MINIMISING THE RISK OF BUSHFIRE

An aerial photograph of a bushfire-prone landscape. The terrain is covered with dense vegetation, including numerous trees and large, rounded clumps of grass. The lighting is bright, casting shadows that highlight the texture of the plants. The overall scene is a mix of green and brown tones, suggesting a natural, undisturbed environment.

MINIMISING THE RISK OF BUSHFIRE

BUSHFIRE BEHAVIOUR - YOUR GUIDE TO BUSHFIRE SAFETY

Bushfires can be a great risk to your home. Understanding the characteristics of how a bushfire behaves is an important facet of bushfire safety. A bushfire is influenced by three key factors; vegetation (fuel), terrain (topography) and weather conditions.

Firstly the amount of vegetation or fuel can influence how hot a bushfire burns and how fast it spreads. Fuel loading is the amount of fuel present in any given area and is the material that is consumed in a fire. Fuel loads include scrub density, litter depth, the percentage of dead scrub as well as the type of vegetation present. The removal of fuel from around your home will reduce fire intensity.

The terrain influences a bushfire's speed and intensity. Fires that burn uphill will burn faster than those on a flat or downhill slope. For every 10 degrees of upslope the bushfire will double its rate of speed. Depending on the topography surrounding your home, you will have a different bushfire risk.

Finally weather conditions are a key factor in the behaviour of a bushfire. Hot temperatures, dry and windy conditions can influence the speed, intensity and direction of a bushfire. Hot dry and windy days increase the bushfire danger rating.

Bushfires spread in three main ways:

- 1. Burning embers** - Embers are burning leaves and twigs that are carried by wind. When an ember lands on vegetation such as dry grass they can start small fires. These fires smoulder, grow and spread if left unchecked. This can create many smaller fires ahead of the main fire.
- 2. Radiant heat** - Radiant heat refers to the high temperatures that radiate from the fire. High levels of radiant heat can heat fuels in front of the fire until they ignite and continue to burn.
- 3. Direct flame contact** - Flames move forward and ignite dry fuels ahead of the fire.

EXAMPLES



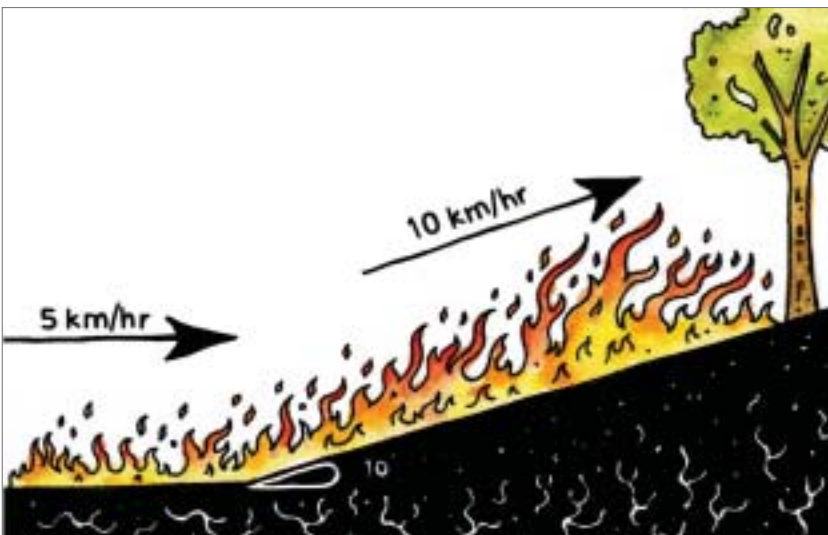
Native vegetation found at Brigadoon



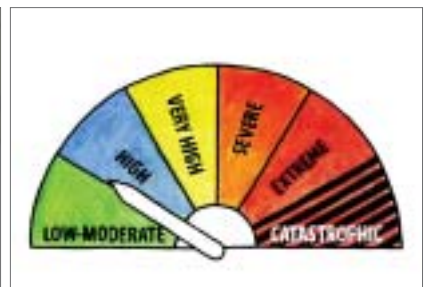
Bushfire engulfing native vegetation



Leaf litter can have a high fuel load



The influence of terrain on bushfire speed



Bushfire Danger Rating.

MINIMISING THE RISK OF BUSHFIRE

This section of the Sustainable Living Guidelines, provides you with advice on how to reduce your bushfire risk.

PLANNING FOR BUSHFIRE SAFETY AT AVON RIDGE

Peet is committed to bushfire safe design at Avon Ridge. Compliance with the Fire Management Plan is a mandatory requirement for each landowner. The Fire Management Plan incorporates a number of planning mechanisms to manage and control the bushfire risk. These measures have been incorporated within the design and planning stages of the estate.

BUILDING PROTECTION ZONE AND HAZARD SEPARATION ZONE

The aim of the Building Protection Zone (BPZ) and Hazard Separation Zone (HSZ) is to reduce bush fire intensity close to dwellings, and to minimise the likelihood of flame contact with buildings.

The BPZ is a low fuel area immediately surrounding a building. This 30 metre zone is to be implemented around all homes and associated outbuildings within the Estate. Ensure that the first five metres around your home is cleared of all flammable material. It is essential that land owners maintain the BPZ to reduce potential damage from fires.

The BPZ should be located in areas of limited existing vegetation to minimise clearing. The thinning process for the BPZ requires supervision (pre and post thinning inspection for individual lots) by a qualified Fire Management Consultant. The Fire Management Consultant will also provide advice on how the vegetation can be suitably modified to meet fire safety criteria whilst minimising the reduction of native vegetation.

The HSZ should extend at least a further 30 metres beyond the BPZ. This zone assists in reducing the fire intensity when a bushfire impacts on buildings within a subdivision. Maintenance of the HSZ requires the removal of dead material to reduce the fuel load. This can be achieved through raking of leaves and dead material and using small controlled fires.

The Fire Management Consultant will provide site specific advice about the vegetation modification required to reduce the risk of bushfires. Ideally your home will be located where there is already minimal vegetation.

When you manage your garden you should consider these options:

- > Ensure that the first five metres around your home is cleared of all flammable material. Reticulated gardens may be located in this zone.
- > For the remaining 25 metres of the BPZ around your home, the spacing of trees should be as such that no crowns are touching or overlapping.
- > Ensure that lower branches are pruned so they are at least two metres off the ground to prevent surfaces fires spreading to trees.
- > Isolated shrubs and understorey species can be retained but dense understorey vegetation should be thinned.
- > Branches should be removed at least two metres back from the eaves of all buildings to create a fuel free buffer around your home.
- > All dead leaves, dead branches and tall grass should be removed from the BPZ prior to construction. Maintain a low fuel load by removing any excess leaf matter, dead branches or tall grass regularly.
- > No tall shrub (height no greater than one metre) or small tree is to be located within two metres of a building (including windows).

EXAMPLES



Hazard Separation Zone



Example of overlapping canopies



Firebreaks in the south western corner of the estate

MINIMISING THE RISK OF BUSHFIRE

For further information on the BPZ and HSZ please refer to Section 6.5 and 6.6 of the Fire Management Plan.

FIREBREAKS

Strategic firebreaks have been positioned throughout the estate to enable access for fire appliances. Strategic firebreaks are positioned along the northern and western boundaries to enable strategic access and fire control for fire appliances.

Firebreaks provide access for emergency service vehicles within the community. Each lot is required to maintain a firebreak along their lot boundary. Lot firebreaks should be at least three metres wide of cleared land and four metre vertical clearance and be maintained annually. It is your responsibility that overgrown vegetation does not encroach over the firebreaks. Management of your firebreak should comply with the *Bushfires Act 1954* and the City of Swan Firebreak Order.

The image on page 45 details the firebreaks for the south western corner of the estate. The green line indicates the strategic firebreaks positioned along the boundary of Avon Ridge. The red lines indicate the lot firebreaks positioned along the boundary of each lot.

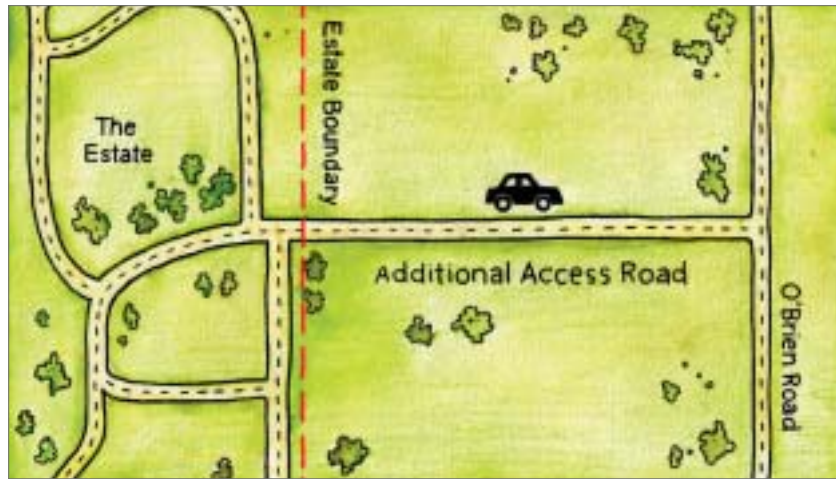
FIRE HYDRANTS

Fire hydrants are to be installed every 200 metres along internal roads and marked with standard fire hydrant markings. To improve fire suppression capability, fire hydrants will be installed at 100 metre intervals on the outer road system interfacing with regional open space on the northern and western edge of Avon Ridge.

ADDITIONAL ACCESS

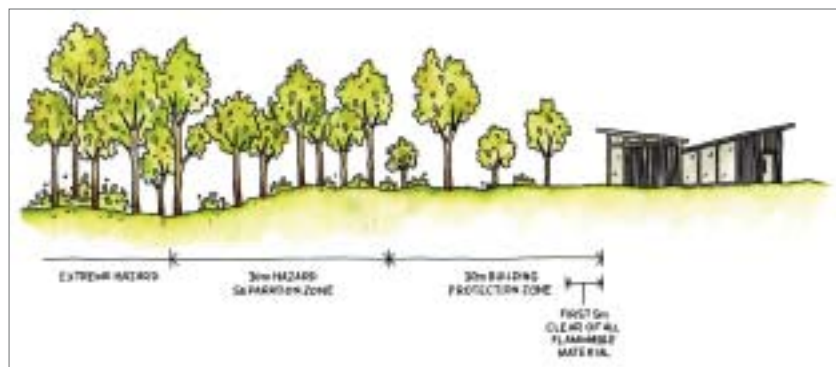
Peet has also provided an additional road linking Connemarra Drive to O'Brien Road. At present the existing development adjacent to Avon Ridge has very poor emergency access with only one entrance through Campersic Road.

The additional link provided by Peet will provide an alternative emergency access route for the community, emergency vehicles and also for the existing residents of Brigadoon.



Map of additional access to O'Brien Road

EXAMPLE OF BPZ AND HSZ



MINIMISING THE RISK OF BUSHFIRE

CONSTRUCTION AND DESIGN

The design and placement of your home is an important aspect of bushfire safety. During the planning and development phase of Avon Ridge, Peet ensured that sufficient design mechanisms were in place for house design and placement. Homes should be located in an area with minimal vegetation to reduce the requirement for vegetation modification of the BPZ. Low fuel loads should be maintained in this area.

Your home must be compliant with the Australian Standard 3959-2009 (AS 3959-2009) 'Construction of Buildings in Bushfire-prone Areas'. AS 3959-2009 requires each lot to be assessed to determine the Bushfire Attack Level (BAL). The BAL will be determined by a qualified Fire Management Consultant. The BAL determines the construction requirements of each dwelling. Compliance with AS 3959-2009 will be assessed by the City of Swan. The following advice has been prepared in accordance with AS 3959-2009 requirements:

1. Simple plan shapes are preferable to complicated designs which can increase wind turbulence and provide traps for burning particles to accumulate against the building.
2. Simple roof lines should be used. They are easier to maintain, and less likely to accumulate debris.
3. Avoid box gutters which can accumulate debris and burning material/embers.
4. Subfloor spaces should be enclosed to prevent burning embers entering.
5. Recessed corners and deep verandas are areas of vulnerability which should be avoided or at least be capable of being enclosed to avoid traps for burning material.
6. Roof pitch: min 22.5° preferred - helps reduce radiant heat exposure.
7. Install mesh screens over entire window assembly to prevent embers from attacking windows.
8. Install bushfire shutters to protect windows and doors.
9. Provide steel mesh gutter guards to minimise the accumulation of debris in gutters.
10. Install metal screens over vents and weep holes.
11. Install non combustible thresholds at doorways.
12. Provide automatic bushfire sprinklers - to roofs, walls and garden areas.
13. External walls should consist of:
 - Non combustible material; or
 - Timber or steel framed, sarked on the outside with fibre cement, steel sheet, bushfire resisting timber.
14. Roofs should feature:
 - a. Non combustible roof sheeting and accessories.
 - b. Sealed roof wall junction.
 - c. Roof ventilation openings fitted with ember guards.
 - d. Sarking directly below roof battens or foil backed insulation blankets over roof battens.
15. Roof Penetrations:
 - a. To be sealed.
 - b. To have ember guards.
 - c. Overhead glass to be Grade A safety glass to AS/288.
 - d. Roof lights as per the Australian Standards.

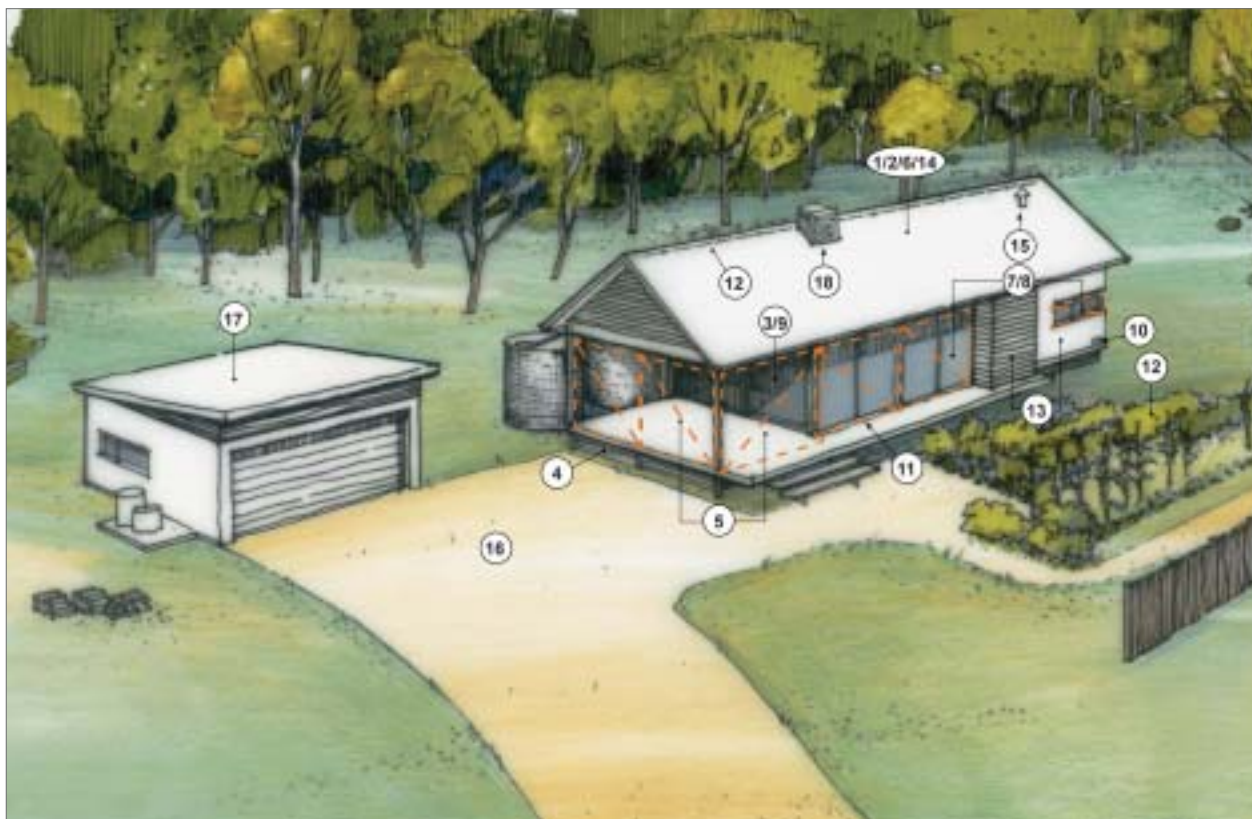
MINIMISING THE RISK OF BUSHFIRE

16. Driveways should

- a) Be located adjacent to your buildings to maximise the protection to the house. There should be clear access to your house.
- b) Be constructed with a trafficable width of four metres. Driveways should be maintained with low fuel loads to ensure easy access and escape in the event of a bushfire.
- c) Meander around significant trees such as habitat trees for Carnaby's Black Cockatoo.

17. Sheds that are not part of the habitable dwelling are to be constructed using non combustibile materials (e.g. colourbond iron, brick, limestone) if within six metres of your home and will comply with AS 3959-2009 construction standards.

18. In dwellings adjoining regional or public open space, evaporative air conditioners will not be allowed to be installed. This will improve building safety and reduce the chance of embers getting into homes.



Your house should be designed to minimise your bushfire risk. This image refers to the numbered dot points in the text.

MINIMISING THE RISK OF BUSHFIRE

MANAGEMENT OF BUSHFIRE RISK

The BPZ is designed to keep your house well protected in the event of a bushfire. However this zone requires suitable management to maintain low bushfire risk. The key to effective and bushfire safe landscaping is to plant native plants that are suited to the local conditions at Avon Ridge. By using predominantly indigenous plants and monitoring the level of vegetation around your home, you will improve your level of bushfire safety as well as contribute to the natural environment of the area.

As covered in the Sustainable Bushland Living section, Peet is encouraging landowners to plant reticulated gardens within the BPZ utilising vegetation native to the area. This will create a low-fuel buffer around your home.

The use of native vegetation minimises the outbreak of non-native species particularly weeds. In addition by planting native flowering plants you will attract butterflies and birds. A number of suitable habitat species are small shrubs that encourage native animals are also appropriate landscaping for the Building Protection Zone providing the understorey vegetation is kept to a minimum.

You should consider the following management techniques:

1. Minimise excess fuel loads in your landscaping by utilising reticulated water and monitoring your usage of dry landscaping materials (ie. dry mulch). Where possible use alternative mulching materials such as pebbles, sand or rocks that aren't flammable.

EXAMPLES



Carnaby's Black Cockatoo -
Calyptorhynchus latirostris (Harewood)



Drooping Leucopogon -
Leucopogon nutans



Echidna -
Tachyglossus aculeatus

MINIMISING THE RISK OF BUSHFIRE

2. Try to eliminate the introduction of weed species. The clearing of vegetation can increase the risk for weed invasion. Weeds not only threaten the native vegetation but a number of weed species are highly flammable and can potentially exacerbate the bushfire risk. Common weeds found in Avon Ridge include Cape Tulip (*Moraea flaccida*), Perennial Veldgrass (*Ehrharta calycina*) and Paterson's Curse (*Echium plantagineum*). Weed management will be undertaken prior to revegetation. Suitable herbicides include Glyphosate and Fusillade®. Biactive Glyphosate should be used to manage weeds in areas located in and nearby to creeks and wetlands. This has a very minimal impact on native aquatic species.

3. Weed management should be undertaken following any fire event as the fire reduces the native vegetation, reducing the competition for weeds, assisting with seed germination and enabling weeds to flourish.

4. Ensure that areas of revegetation retain a low fuel load by periodically removing and disposing all dead leaves, tall dead grass, twigs and tree branches are by either controlled burns in the wet season, heaping, carting away or mulching.

EXAMPLES



Example of low fuel native garden



Measurements of fuel load



Example of a high fuel load

NOT ACCEPTABLE



Paterson's Curse - *Echium plantagineum*
(Colin Bower, Floraphoto)

MINIMISING THE RISK OF BUSHFIRE

One of the bushfire management techniques Peet aims to employ prior to the commencement of development is Hazard Reduction Burning. Hazard Reduction Burning involves controlled burns under pre-determined environmental conditions to reduce fuel loads amongst other land management objectives.

Hazard Reduction Burns are planned over a number of years, to create a mosaic of burnt and unburnt areas. This allows for biodiversity retention, as it allows fauna to disperse and maintains the diversity within the plant communities over the site. The creation of this mosaic of burnt and unburnt areas will also allow Black Cockatoo species to continue to use the site during this time. Hazard Reduction Burns form a part of the Bushfire Management objectives which landowners can use to reduce risk.

Property owners can undertake their own prescribed burning during winter months to reduce the risk of bushfires. This requires suitable weather conditions and good planning. Prescribed burning is less intrusive than other fuel reduction methods such as slashing and burning. Any prescribed burning undertaken by the property owner should be conducted with extreme caution and may require approval from the City of Swan.

ONGOING MAINTENANCE

Ongoing maintenance of fire management measures is essential for bushfire safety at Avon Ridge. The measures in place at Avon Ridge to maintain and control bushfires should ensure that your home is well prepared for bushfire season. However, there are a few extra tips that will increase the chances of your home surviving a bushfire.

To conduct ongoing maintenance and maintain the reduced level of risk and threat of fire on your block, you should consider the following:

1. Keep an eye on the weather. Impending extreme weather conditions should be a warning sign to make sure that your home is bushfire ready. Stay up to date with the bushfire warnings in your area through local radio and the FESA website. The City of Swan and local newspapers provide advice on fire prevention programs in the area.
2. Should a bushfire threat be current, take appropriate measures to ensure the safety of you and your family. Heat and smoke can be a great risk to human health. In the event of a fire the safest option is to leave your home the evening before or early in the morning on days with extreme bushfire risk. Should you decide to stay and defend your home, learn what it takes to actively defend your home and the risks associated with staying.
3. Maintaining firebreaks requires an annual clearing of the three metre wide break located adjacent to each lot boundary. Property fences and gates must be in good condition so that overgrown vegetation does not impinge on the fire break.
4. Conduct weed management to control weeds particularly following a fire event.

EXAMPLES OF REDUCING BUSHFIRE RISK



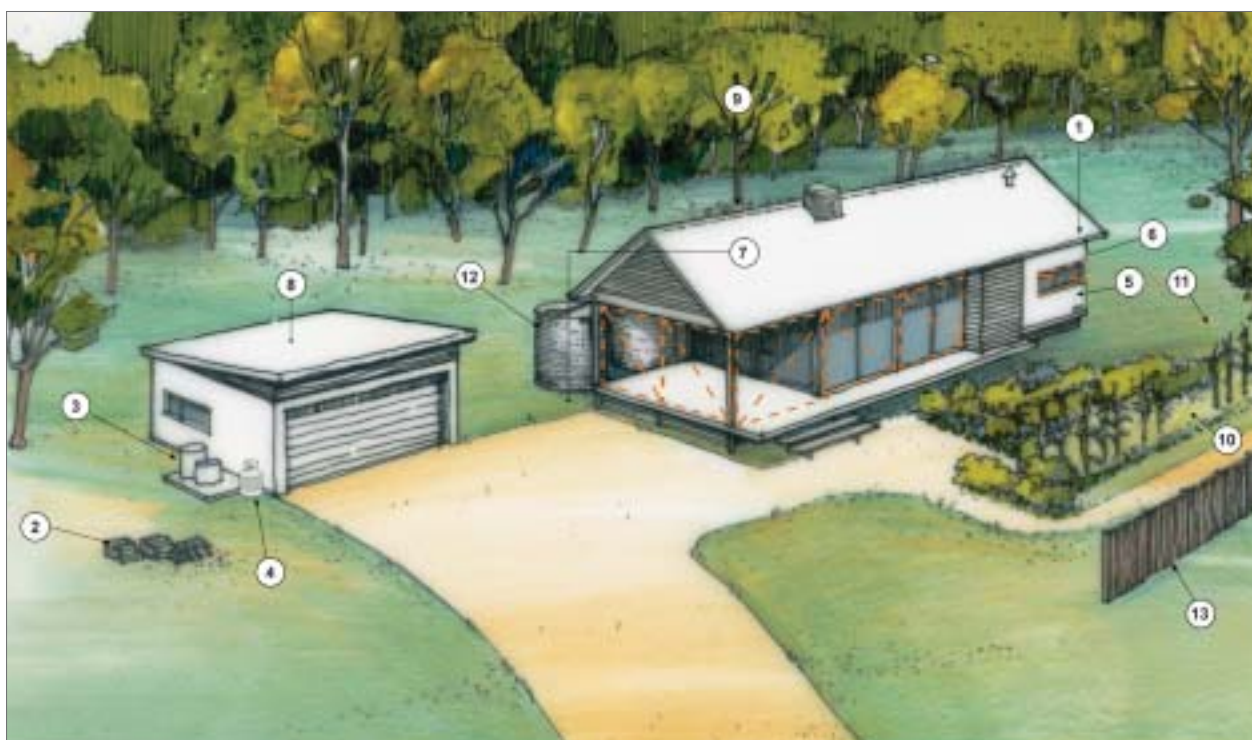
Resident raking up leaf litter and twigs under trees



Fire fighter undertaking Hazard Reduction Burning

MINIMISING THE RISK OF BUSHFIRE

5. Remove leaves from the gutters of your house.
6. Remove all flammable materials from around your house, such as piles of wood, boxes, paper etc.
7. Ensure any fuel and chemicals are stored away from the house.
8. Check that all relief valves of gas cylinders are pointing away from your home.
9. Check that there is no excess fuel or flammable material on the outside of the house, such as flaking paint, leaves etc.
10. Keep all gaps in the roof or walls suitably sealed to reduce penetration of embers.
11. Install sprinklers around your house - the risk of bushfire is reduced by maintaining high levels of moisture on and around your house. Sprinklers on roofs and surrounding the perimeter of your house are a good method to maintain moisture. Be aware that town water or reticulated water supplies may have reduced pressure or be cut off in the event of a fire due to the high demand for water.
12. Ensure that surrounding buildings and structures have minimal fuel loads as well. This could include sheds, fences, cubby houses and pet enclosures. Should these structures ignite, there will be an increased risk to the main building.
13. Create and maintain a minimum two metre gap between your house and all tree branches.
14. Implement a reticulated garden in the five metre buffer around your home.
15. Use less flammable material around your home such as sand, rocks or pebbles.
16. Make sure you have access to your own water supply - it is likely that you will lose water and power supplies during a bushfire. It is important you have an alternative water supply. You will need a petrol, diesel or generator powered pump to draw water from your alternate supply.
17. Ensure that brush wood fencing or other flammable screening materials are not used within two metres of a building.



Ongoing maintenance of fire management measures is essential for bushfire safety. This image refers to the numbered dot points included in the text.

CHECKLISTS



CHECKLIST

SUSTAINABILITY

A minimum of **10 points** must be achieved to obtain approval at Avon Ridge.

Where individual elements score less than **10 points** a combination of options shall be used in order to achieve the minimum score.

This checklist should be completed and attached to your plans when submitting them to Peet for approval.

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
1.0	Passive solar (energy efficient) design			
1.1	At least one main living area with northerly solar access (minimum of 50% glazing [of gross wall area] on that northern elevation and area not permanently covered)	5	Clearly shown in final design (endorsed by Peet)	
1.2	Maximum of 20% glazing (of gross wall area) on both eastern and western elevations, unless it can be demonstrated that thermal performance will not be affected by east and west windows	3	Clearly shown in final design (endorsed)	
1.3	Ceiling and/or roof insulation to the value of R3.5 to reduce heat load	3	Proof of purchase / order from supplier	
1.4	East and west cavity bricks walls are insulated (minimum value R2.0) to reduce heat load in summer	5	Proof of purchase / order from supplier	
1.5	Outdoor living areas located on the north side to facilitate solar access	2	Clearly shown on final design (endorsed)	
1.6	Roof space is naturally ventilated (i.e. not mechanical or requiring energy to operate) to minimise heat transfer into house	2	System clearly shown on final design (endorsed) Proof of purchase / order	
2.0	Reducing energy use and greenhouse gas emissions			
2.1	Centralised air conditioning is not installed	3	Final design (endorsed) indicates no centralised air conditioning	
2.2	Ceiling fans will be installed in at least the main living areas and bedrooms	3	Shown clearly on final design (endorsed)	
2.3	Renewable energy will be installed (photovoltaic solar panels or wind turbine)	8	Proof of purchase / order from supplier	
3.0	Sustainable materials selection			
3.1	Minimum 20% construction (by volume) is obtained from sustainable, renewable sources (that are certified by a credible third party). Examples include: > Lower-embodied energy bricks have been used (e.g. Eco-brick) > Materials sourced from on-site (e.g. soils for rammed earth or mud brick construction)	5	Proof of purchase / order from supplier	

CHECKLIST

SUSTAINABILITY

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
4.0	Reducing water use			
4.1	Hot water re-circulating system is installed to reuse water and avoid wastage	4	Clearly shown on final plan (endorsed)	
5.0	Designing for Life			
5.1	Design contains at least one of the following universal or adaptable design elements:		Clearly shown on final design (endorsed)	
	At least one hobless shower	2		
	Reinforcement of bathroom walls in at least one bathroom (for later installation of grab rails)	2		
	At least one level entrance	2		
	Doorways widened to 900mm	2		
	>75% of kitchen cupboard/pantry are roll-out drawers	2		
	Power outlets raised to 600mm	2		
	Light switch height lowered to 105cm off the ground	2		
6.0	Minimising waste and improving recycling			
6.1	Minimum 15% construction (by volume) made from either (or a combination of) the following: > Reused resources and/or materials with recycled content (full or part). Examples include: - Bricks containing recycled content - Recycled based in concrete slab - Recycled timber (e.g. framing, flooring, indoor stairs) - Reuse of products such as steel or timber	5	Proof of purchase / order from supplier Clearly shown on final design (endorsed)	
6.2	Built-in space for separate organic, recyclable and general waste bins has been provided	1	Clearly shown on final design (endorsed)	
Total Points Present				

APPLICANT DETAILS	
Name:	_____
Property Details:	_____
Signature:	_____
Date:	_____

FOR PEET USE ONLY	
Total number of Approved Points:	_____
Touch of White Compliance: (Y/N):	_____
Assessor Name:	_____
Signature:	_____
Date:	_____

CHECKLIST

BUILT FORM

A minimum of **15 points** must be achieved to obtain approval from Peet. Where individual elements score less than 15 points a combination of options shall be used in order to achieve the minimum score.

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
1.0	Outbuildings			
1.1	Incorporate similar roof forms to those of the primary dwelling	3	Drawings	
1.2	Incorporate similar wall materials to those of the primary dwelling	3	Drawings	
2.0	Fencing			
2.1	Pet enclosure incorporates 'Ringlock' or similar approved fencing.	3	Drawings	
2.2	Screen fencing matches wall finishes on primary dwelling or from Colorbond 'Riversand', 'Tea Tree', 'Hedge', 'Meadow', 'Willow', or 'Grey Ridge'	3	Drawings / Finishes Schedule	
3.0	Driveway			
3.1	Curvilinear / meandering driveway provided to dwelling	2	Site Plan	
3.2	Driveway finished in earth colours or matching roads within Avon Ridge	2	Drawings / Finishes Schedule	
4.0	Building height			
4.1	Single storey dwelling	5	Drawings	
5.0	Building to suit site contours			
5.1	Split level design provided	5	Drawings	
5.2	Framed construction with floor floating above ground level provided	5	Drawings	
6.0	External walls			
6.1	Composite of wall finishes / colours incorporated	4	Drawings	
6.2	Rammed earth or mud bricks utilised	6	Drawings	
6.3	Lightweight cladding provided to at least 50% of external walls (by length)	6	Drawings	
6.4	Face brick / block work in earthy colours	3	Drawings / Finishes Schedule	
6.5	Subfloor space enclosed to limit potential for fire spread	4	Drawings	

CHECKLIST

BUILT FORM

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
7.0	Roofs			
7.1	Contemporary roof forms such as skillion or curved roofs used	5	Drawings	
7.2	Roof pitch between 20°-25° used (bushfire mitigation)	5	Drawings	
7.3	450mm minimum eaves overhang provided to habitable rooms	4	Drawings	
8.0	Garages / carports			
8.1	Vehicles obscured from public view through garage / carport orientation, screen walls, garage doors etc	3	Drawings	
9.0	Service areas			
9.1	Mechanical plant / drying / storage areas screened from public view	3	Drawings	
9.2	Mechanical plant located at ground level	3	Drawings	
Total Points Present				

APPLICANT DETAILS	
Name:	_____
Property Details:	_____
Signature:	_____
Date:	_____

FOR PEET USE ONLY	
Total number of Approved Points:	_____
Touch of White Compliance: (Y/N):	_____
Assessor Name:	_____
Signature:	_____
Date:	_____

CHECKLIST

SUSTAINABLE BUSHLAND LIVING

A minimum of **10 points** must be achieved to obtain approval from Peet.

Where individual elements score less than **10 points** a combination of options shall be used in order to achieve the minimum score.

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
1.0	Lot landscaping			
1.1	Shrubs selected from the Recommended Plant List represent 30-50% of all planted	3	Proof or purchase/order from supplier	
1.2	Shrubs selected from the Recommended Plant List represent 50-100% of all planted	5	Proof or purchase/order from supplier	
1.3	Trees selected from the Recommended Plant List represent 30-50% of all planted	3	Proof or purchase/order from supplier	
1.4	Trees selected from the Recommended Plant List represent 50-100% of all planted	5	Proof or purchase/order from supplier	
1.5	Controlling invasive plants	3	Random spot checks by Peet	
2.0	Paving			
2.1	Drainage from non-permeable surface directed to planted area	3	Random spot checks by Peet	
2.2	No more than 10-20% of garden area to be permeable hardscape surface	4	Proof or purchase/order from supplier	
3.0	Water			
3.1	Bubbler, trickle or non-spraying irrigation system will fully automated operation	4	Proof or purchase/order from supplier	
Total Points Present				

APPLICANT DETAILS	
Name:	_____
Property Details:	_____
Signature:	_____
Date:	_____

FOR PEET USE ONLY	
Total number of Approved Points:	_____
Touch of White Compliance: (Y/N):	_____
Assessor Name:	_____
Signature:	_____
Date:	_____

CHECKLIST

MINIMISING THE RISK OF BUSHFIRE

The following table highlights the number of points scored for the inclusion of bushfire safety measures.

These key measures should also be checked regularly (once yearly to maintain low fuel loads) to ensure there is minimal bushfire risk to your home.

This checklist includes mandatory requirements of bushfire safety as well as recommended actions.

For **recommended** objectives, a minimum of **10 points** must be achieved to obtain approval from Peet.

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
MANDATORY				
1.0	Clearing of vegetation			
1.1	Get advice and approval from the Fire Management Consultant regarding pre-clearing of vegetation	5	Completion of Pre-clearing checklist (endorsed by Fire Management Consultant)	
1.2	Get advice and approval from the Fire Management Consultant regarding post-clearing of vegetation	5	Completion of Post-clearing checklist (endorsed by Fire Management Consultant)	
2.0	Implementing a Building Protection Zone (BPZ)			
2.1	Clearing of all flammable material in the first 5 metres around your home	2	Random spot checks by Peet	
2.2	Removal of dead leaves, dead branches and tall grasses	2	Random spot checks by Peet	
2.3	Ensuring that the density of trees is kept to a minimum by making sure that no canopies are touching or overlapping	2	Random spot checks by Peet	
2.4	Removal of all branches at least 2 metres off the ground	2	Random spot checks by Peet	
	Removal of all branches at least 2 metres back from the eaves of all buildings	2	Random spot checks by Peet	
3.0	Implementing a Hazard Separation Zone (HSZ)			
3.1	Maintaining low fuel loads within HSZ	5	Random spot checks by Peet	
3.2	Maintenance lot firebreaks within HSZ	5	Random spot checks by Peet	
4.0	Construction and design			
4.1	Compliance with construction standards AS 3959-2009	5	Shown clearly on final design	
4.2	Plan driveways adjacent to buildings at 4 metres trafficable width	3	Shown clearly on final design	

CHECKLIST

MINIMISING THE RISK OF BUSHFIRE

CRITERIA NO.	ELEMENT	POINTS SCORED	HOW TO DEMONSTRATE	ELEMENT PRESENT
RECOMMENDED				
5.0	Management of bushfire risk			
5.1	Utilising low-fuel mulch and landscaping materials such as pebbles or rocks	3	Proof or purchase/order from supplier	
5.2	Installation of ember guards on gutters	3	Proof or purchase/order from supplier	
5.3	Install all relief valves of gas cylinders so that they are pointing away from the house	2	Random spot checks by Peet	
5.4	Remove all flammable materials from around your house	2	Random spot checks by Peet	
5.5	Remove leaves from the gutters of your house.	2	Random spot checks by Peet	
5.6	Ensure any fuel and chemicals are stored away from the house	2	Random spot checks by Peet	
5.7	Remove excess fuel or flammable material on the outside of the house	2	Random spot checks by Peet	
5.8	Keep all gaps in the roof or walls suitably sealed to reduce penetration of embers	2	Random spot checks by Peet	
5.9	Ensure there is sufficient access to an alternative water supply	2	Random spot checks by Peet	
Total Points Present				

APPLICANT DETAILS

Name: _____
 Property Details: _____
 Signature: _____ Date: _____

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Total number of Approved Points: _____
 Touch of White Compliance: (Y/N): _____
 Assessor Name: _____
 Signature: _____ Date: _____





PEET