



Khancoban Alpine Estate
Design Guidelines



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Introduction

The **Khancoban Alpine Estate** is situated on the northern perimeter of the existing village of Khancoban, on a section of the original village plan previously occupied by Snowy Mountain Authority houses. The original streets and cul-de-sacs are still clearly defined by established avenues of trees, and the estate has an abundance of established mature trees both native and deciduous, providing a natural link with the existing village.

While maintaining this natural link, **Khancoban Alpine Estate** offers residents the security of a comprehensive set of Design Guidelines that will protect the value and integrity of the Estate and an outstanding quality of environmentally sustainable and energy efficient alpine living.

These Design Guidelines are to help with the design of all residential properties within the **Khancoban Alpine Estate** and reflect the requirements proposed in the BASIX development tool, to be introduced throughout NSW on 1 October 2005. They provide a complete site analysis that will enable your architect/builder to fully utilize the solar access on your block and guarantee minimum solar shadowing from neighbouring blocks.

BASIX is the NSW Government target for sustainable residential development. It is a web-based planning tool designed to assess the potential performance of new homes against a range of sustainable indices; landscape, water, stormwater, thermal comfort and energy. BASIX aims to reduce the environmental impact of these features in new developments and to produce homes that are more comfortable and cheaper to run than most existing homes.

The major impact of both the BASIX Sustainability Index and the **Khancoban Alpine Estate** Design Guidelines is that your dwelling will provide optimum living conditions and huge savings in energy costs.

Important Considerations

Relationship to the Tumbarumba Shire Council Development Controls

The Urban Design and Environment Controls, specific to **Khancoban Alpine Estate** form a part of the Development Consent issued by the Tumbarumba Shire Council. These controls differ from and override Council's standard requirements, and are outlined in the guidelines. For all other planning controls you should consult with applicable Tumbarumba Shire Council controls and directly with Council's officers for any further information.

Block Sizes and Dual Occupancy

With block sizes being considerably larger than in the existing village of Khancoban, varying from 555m² to 1259m², dual occupancy is permitted at the **Khancoban Alpine Estate**. However, all dwellings must conform to the Design Criteria indicated in this document, including the BASIX Sustainability Index, and adhere to the Planning Regulations of the Tumbarumba Shire Council.

Similarly, higher density Unit Construction could take place on larger blocks or combinations of blocks, as long as the design criteria is adhered to, and the Tumbarumba Shire Council grants approval.

Temporary Structures

To maintain design integrity and to protect your investment, temporary structures may not be erected with the exception of those necessary for construction. These structures must be removed upon completion.

Refer to the 'Design Approval Process' flowchart to fully understand the approvals process and other key stages involved in building a residence.

A The Approval Process

The design guidelines prepared in this booklet have been prepared to assist you and your architect/builder when designing your dwelling. They cover the approval process, from purchase of your block of land, through to final completion of your dwelling.

All building designs are to be reviewed and approved by the appropriate professional staff and processes of the Tumbarumba Shire Council.

A1 Flowchart—Design and Approval Process



All proposals will be assessed on the basis of compliance with the Protective Covenants and the Design Guidelines, with regard to the likely impact on the appearance and amenity of the local area and neighbourhood.

A2 Design Approval

Suggested guidelines prior to lodgement of Plans to the Tumbarumba Shire Council for major works by Builders:

- Site Plan (1:200 minimum) showing siting of all structures and external works including driveways,

paving, water tanks, water heating systems, retaining walls, landscaping, boundary setbacks, eaves overhang extent and all floor areas indicated.

- A series of shadow diagrams between 9 am and 3 pm in mid winter showing the extent of overshadowing for the dwelling plus the shadow impact on all adjoining properties.
- Screening proposed to adjoining properties, where required.
- Floor plans and elevations (1:100).
- Streetscapes, fencing types, layouts, fencing colours & extent etc (1:100).
- Schedule of external materials, finishes and colours for walls, roofs, feature elements, including garage doors, fences, retaining walls, driveways, paving etc.
- NatHERS Assessment—4.0 star minimum rating.
- Full application plans and documents to be submitted to the Tumbarumba Shire Council including full complete checklist with relevant Tumbarumba Shire Council controls and guidelines.
- A full complete checklist, Section 88B Instrument (Covenant Controls) and Design Guidelines. For minor works by purchasers/owners, i.e. fences, retaining walls, pergolas, privacy screens, sunshading etc
- Site Plan (1:200 minimum) showing location of proposed works.
- Details of proposal—plans and elevations at appropriate scale depending on details, and any relevant supporting sketches.
- Schedule of design, materials, finishes and colours.

All drawings are to be submitted in duplicate except for schedules of which only one copy is required.

B Siting Your Dwelling On Your Land

Khancoban Alpine Estate has been carefully planned to achieve various neighbourhood amenity and environmental benefits, especially in relationship to the BASIX Sustainability Index and fully utilizing the Solar Access Zone on each block. The design of your dwelling can take advantage of these benefits, and further enhance them. For example, the Design Guidelines encourage the creation of larger backyard areas, with front yard treatments and setbacks that harmonise with the streetscape.

Utilizing the Solar Access Zone allows your block to receive adequate sunlight in certain areas of your dwelling, outdoor spaces, for solar water heaters and clothes drying areas. This will not only provide you with a more comfortable living environment, but also greatly reduced energy costs affording you great financial savings.

To this end, every block of land on the **Khancoban Alpine Estate** has been environmentally assessed in

accordance with the BASIX Building Sustainability Index and the Solar Access Zone guidelines to enable your dwelling to not only comply, but also surpass the regulations to be introduced by the NSW Government on 1 October 2005.

For further information you may refer to the Sustainable Energy Development Authority (SEDA) document entitled Solar Access for Lots, however, on no account do we recommend the placement of garages or non-living areas on the northern side of the dwelling. For too long house designers have been limited by the streetscape and placement of the garage at the front of the dwelling. A house is built primarily for the benefit of people, not cars, so full utilisation should be made of the Solar Zone to allow for maximum solar efficiency and cost effectiveness in your dwelling.

For example, if your lot faces south to the street then you may well have no windows on the 'front' of the dwelling, but windows to the north and east to

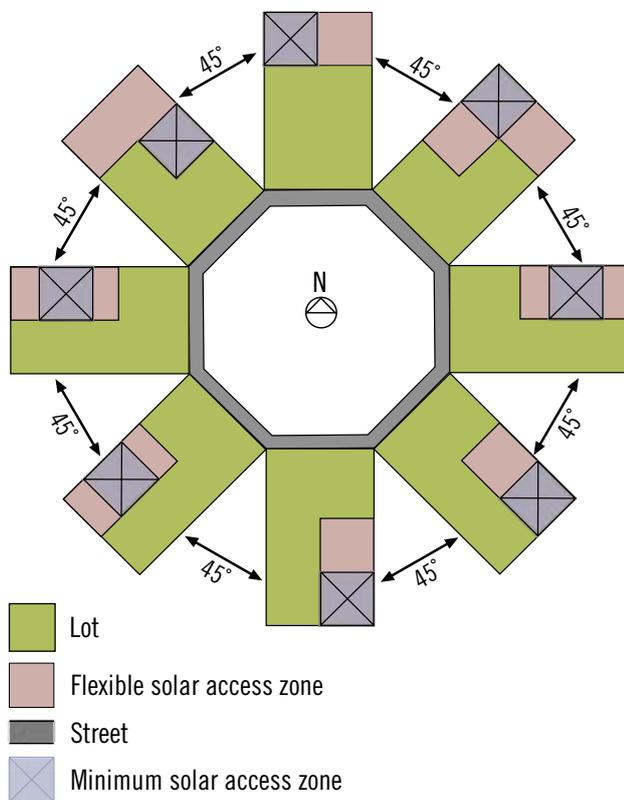


Figure 1. Flexible and Minimum Solar Access Zones

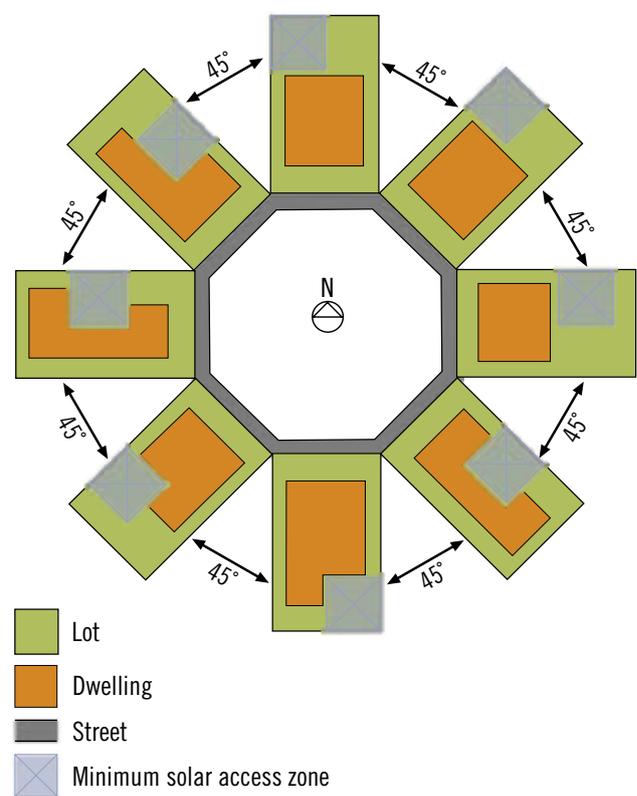


Figure 2. Minimum Solar Access Zones and House Footprints



Figure 3. Khancoban Alpine Estate, showing solar access zones

maximise the solar effectiveness of the sun. However, if your lot faces north to the street then you would allow for driveway access to the western side of the rear of the dwelling for the placement of the garage.

B1 Solar Access Zones

This tool specifies that each lot in the subdivision have both a Flexible Solar Access Zone (FSAZ) and a Minimum Solar Access Zone (MSAZ)

- The FSAZ is the reserved part of the lot that may not be built on, thereby allowing solar access to glazing and private open space.
- The MSAZ is the minimum area of the FSAZ that may not be built upon. The MSAZ can be moved to any place within the FSAZ at development application stage to accommodate a range of house footprints. Once the MSAZ and the dwelling are located at development application stage, the FSAZ

is no longer applicable and can be built upon.

This service has been offered at no additional cost to the purchaser.

B2 Usable Open Space

The objective is to provide usable private open space with good solar access without adversely affecting the amenity of adjoining properties.

The enclosed ‘Generic Set Out Plans’ indicate the available area on the lot where a dwelling can be best sited for maximum efficiency. The setbacks shown indicate boundary offsets and the notations identify conditions applicable to the Private Open Space requirements.

Building Setbacks

In order to improve the presentation of dwellings in **Khancoban Alpine Estate**, the following guidelines are applicable.

Front

Dwelling setbacks from primary street frontages are:

- 4.5m for east-west facing lots.
- 5.5m for north-south facing lots.

Verandas, porches, balconies and similar architectural elements are permitted to project up to 2m forward of the dwelling setback.

Garages should be set back from the front building facade and/or verandas, porches or balconies by a minimum of:

- 1.2 metre in the case of single storey dwellings
- 1.5 metre in the case of two storey dwellings.

Rear

- 6 metre minimum setbacks for predominantly east, west and south facing lots subject to solar access of adjoining properties.
- 7.4 metre setbacks for predominantly north facing lots if 2 storeys, 6m in the case of single storey in order to allow minimum shading of the backyard.

Side

- 1 metre minimum generally to walls on single story, with consideration for person or vehicle access to rear of the dwelling.
- Setbacks of upper levels are to be determined by the extent of overshadowing of other properties. Refer to Figure 7.

B3 Building Envelope

A minimum dimension of 2.5m is required between the openable window, being the window parallel to the side or rear boundaries of a living room at ground level, and the side or rear boundary adjacent to the principal private open space of an adjoining property.

This is to ensure an acceptable acoustic separation between living areas on one property and the main private open space area on the other.

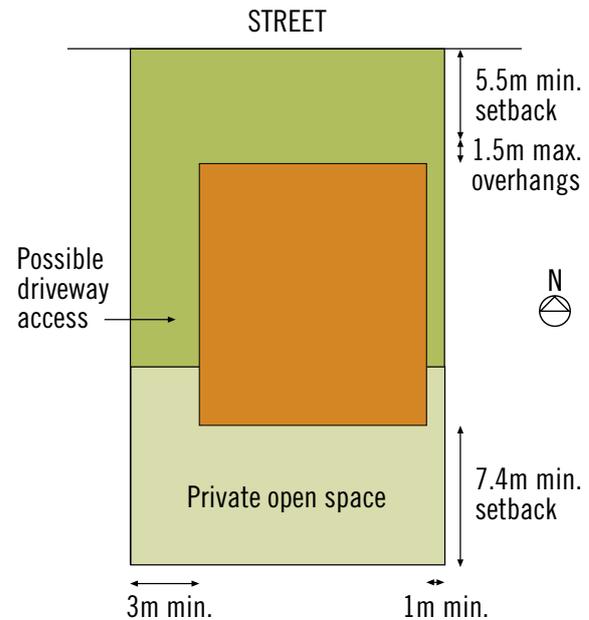


Figure 4. Example of north facing lot

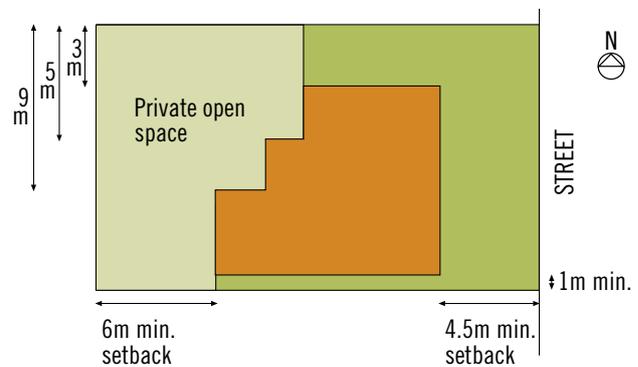


Figure 5. Example of east-west facing lot

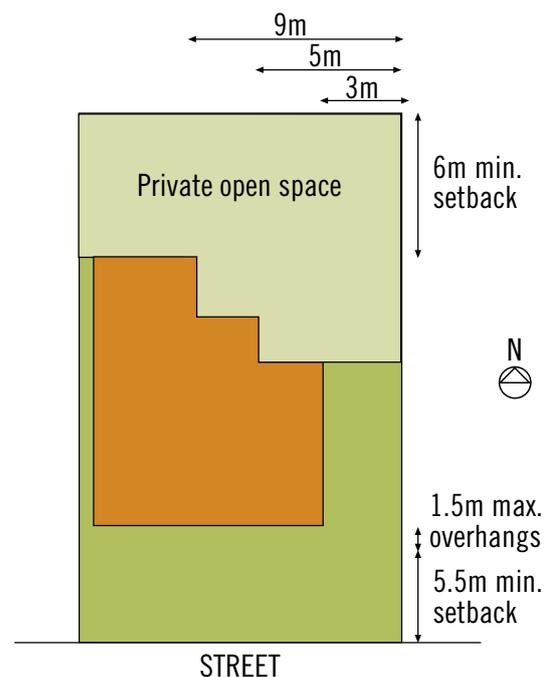


Figure 5. Example of south facing lot

No windows of an upstairs living room are to overlook the principal open space of an adjoining property without some form of screening.

B4 Building Height & Treatment

Generally one or two storey dwellings may be constructed at **Khancoban Alpine Estate**.

Single storey dwellings are preferred where overshadowing of adjoining properties needs to be minimised. Consideration of the neighbouring property's solar access zone has influenced the **Khancoban Alpine**

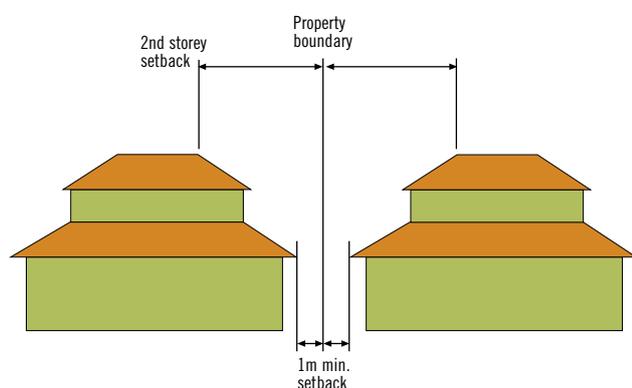


Figure 7. Second storey setback to prevent overshadowing

Estate Design Guidelines in determining blocks suitable for two storey developments.

B5 Garages and Carports

Garages, carports and outbuildings are to be single storey in height and are to be designed and painted to integrate with and complement the style of the main dwelling on each allotment.

Their roof pitch must match or be similar to the roof pitch of the main dwelling, with carports to be no greater than 3 metres in height.

Where freestanding carports are proposed they should be at the rear of the lots.

B6 Roof Designs & Pitch

Roofs and rooflines will be an integral part of the **Khancoban Alpine Estate**.

The predominant roof forms should be pitched with gables, hips or a combination of both, with the minimum roof pitch being a minimum of 25 degrees.

Please note that flat or other types of roofs are allowed as a design element but should not be a predominant design element.

C Community and Privacy

Quality of life, privacy, security and sustainability are among the main objectives of the **Khancoban Alpine Estate**.

C1 Privacy Considerations

To ensure privacy both within your home and in your back yard or courtyard and too ensure maximum use of your Solar Access Zone the following guidelines are suggested:

- Buildings of more than one storey should be designed and sighted to minimise over-looking and over-shadowing of adjoining properties.
- Screening devices and landscaping can help to minimise the effect but careful consideration at the design stage of layout and the location of

windows and balconies is suggested to improve visual privacy.

- Windows on upper floors should not be placed directly opposite existing windows in adjoining dwellings if there is a risk of overlooking and loss of privacy, unless suitable screening is provided.
- Screening may be required to any windows if they directly overlook adjoining property or private open space.

C2 Security

Front entrances to dwellings should be clearly visible from the street with streetscapes and front of allotments visibly open to the community for passive

surveillance and should provide an obvious point of entry to the dwelling.

C3 Fencing

The **Khancoban Alpine Estate** Design Plan provides the basics for a high quality streetscape that both maintains, and adds to the streetscape integrity of the existing Khancoban Village.

The colour and scheme of all fencing should be of a nature to blend in with the surrounding landscape and environment.

Front Boundary Definition

In general front boundary fences are not recommended

with gardens, hedges and shrubs, enhancing the existing streetscapes and mature trees, being preferred.

If, however, front fences are desired, they should be of a nature to be totally unobtrusive in the overall streetscape environment and not greater than 1.2 metres high. The design of the fence and the proposed building material should be submitted with your detailed design plans.

Side and Rear Fencing

Due to rural bushfire requirements side and rear fencing needs to be of a fireproof nature, constructed to a maximum height of 1.8m, and coloured to blend in with the natural surrounds.

D Lifestyle and Environment

D1 Solar Opportunities for Lots

The main objective is to provide usable private open space and living areas with good solar access zones, without affecting the amenity of adjoining properties.

Notwithstanding this, the aim is to encourage rooftop solar systems and other sustainable systems like rainwater tanks. These features will form a key visual element in the **Khancoban Alpine Estate**.

No overshadowing of Solar Collectors on adjoining properties will be permitted, with all solar collectors having a north facing installation.

D2 Energy Efficiency Within The Dwelling

Each dwelling house is to be designed in order to achieve a minimum 4 to 5 star energy rating. Specifically:

- A minimum 4 star energy rating for the building envelope of new dwellings, using Nationwide House Energy Rating Software (NatHERS) or House Energy Rating Management Body (HMB) accredited tool.
- A minimum 4.0 star hot water system using the SEDA greenhouse score for hot water heaters.
- Double-glazing should be used for maximum

comfort and efficiency.

- Insulation is vital in achieving a minimum 4 star energy rating. Based on the Australian Standard (AS2627 1-1993), in Khancoban, ceilings will require R.4 rated insulation material and external walls R.2 rating. For maximum efficiency, internal walls should also be insulated with R.1.5 rated insulation and floors, if timber, with R.2 rated insulation. Refer the Energy Smart chart or visit www.energysmart.com.au

NatHERS is a sophisticated High Rating software application that estimates the heating and cooling energy consumption of a house. The details of a house plan are entered into the computer and a star rating (0-5, with 5 being the maximum) is generated. Developed by the CSIRO, it may be used by an Accredited House Energy Rating (HER) Assessor on all dwelling types.

The HMB, established by the Sustainable Energy Development Authority (SEDA), is responsible for administering and accrediting House Energy Rating Assessors. An up to date list of assessors can be found on the HMB web site at www.hmb.net.au.

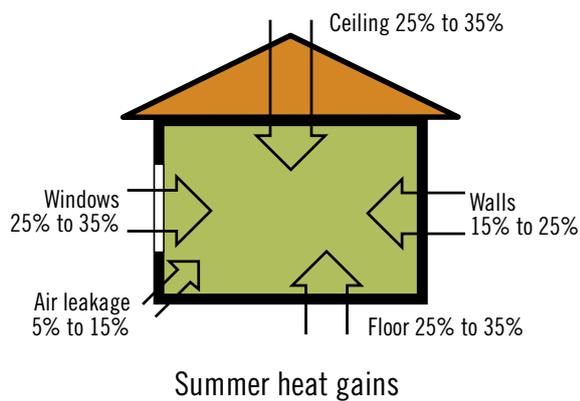
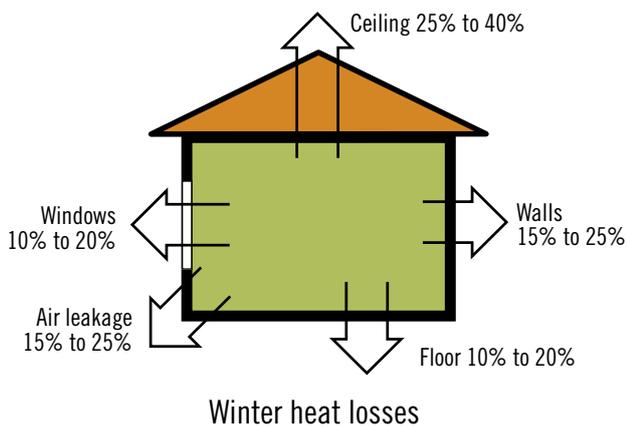


Figure 8. Winter and summer heat gains and losses

D 3 Sun Control

North facing or north/east facing windows and living areas are the optimum to make full use of both passive

and active solar energy. At Khancoban 900mm eaves will protect from the hot summer sun, but will allow the winter sun to penetrate and warm the dwelling.

Western windows should be kept to a minimum and if used should be well shaded to protect against the scorching summer sun.

Buildings should be designed using the NatHERS program ensuring maximum solar design efficiency throughout both winter and summer conditions. This will enable comfortable living conditions throughout the year and low energy consumption, along with huge financial savings. Refer chart for details or visit www.seda.nsw.gov.au

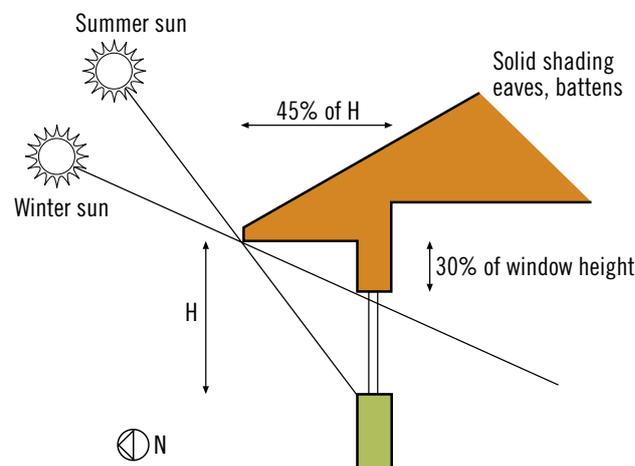


Figure 9. Passive control of summer and winter sun

E Building Requirements and Materials

To protect the design integrity, lifestyle reward and investment potential at **Khancoban Alpine Estate**, we have established guidelines for external building materials, colours and other related finishes.

The aim is to utilize the colours, textures and geographical features of the natural surrounds so that structures blend into the landscape and add unity to the Estate.

E1 Building Appearances

The building appearance could be described as

'Contemporary Australian' and is inspired by the simple use of gables and hipped forms, which are traditional to Australian architecture.

Materials may be quite diverse, however, with an emphasis on harmony with the natural colours and surrounds of the Estate and environs.

Siting of the dwelling is of supreme importance, so that the Solar Access Zone is fully utilised, maximising use of the sun and thermal efficiency, with verandas, balconies and pergolas incorporated both functionally and aesthetically in the overall design.

E2 Decks, Balconies and Related Design Elements

Upstairs decks and balconies should be built to form framed porticos or covered areas of entries to houses at ground level. Timber framed verandas and pergolas also help to delineate and shade openings. These add-on elements should be painted or stained to match the colour of the main dwelling.

E3 Outdoor & Supplementary Items

Outside Structures

Outdoor structures, including pergolas, gazebos and storage sheds should only be constructed of materials, and of a design and appearance, to complement the main dwelling.

Subject to other provisions of these Guidelines, outside structures must be located to the rear of the property

Attached Items

Visually obtrusive and unsightly items such as satellite dishes, utility meters, roof and window mounted air conditioning units, A/C condensers, clotheslines and garden sheds are to be visually unobtrusive from the streets and suitably screened.

Boats/Trailers/Car Storage

When planning the design and sighting of the dwelling, provision should be made for storage of boats, trailers, cars, caravans and similar large items to be stored out of public view and to be suitably screened.

F Landscaping

F1 Landscaping Considerations

At best a basic landscape design should be incorporated with the dwelling design so that continuity is obtained with full use of screening and shading shrubs and trees. In particular, plantings on the northern side of dwellings should taper away from the dwelling on an angle of 30 degrees to avoid shading in the winter months. Refer to Figure 10.

Khancoban Alpine Estate has a variety of existing native and introduced deciduous trees and shrubs so your Landscape Design can be quite diverse utilising the colours and tones of the local vegetation, however, with due regard for water usage and sustainability.

F2 Driveways

The design of your driveway must be well considered in order to give your property a cohesive look with its neighbours.

Desirably, driveways should be constructed of pervious materials, such as gravel or modular paving or similar, paved to the full width of the driveway.

Driveways are to avoid services such as telephone lines, town water and sewerage lines.

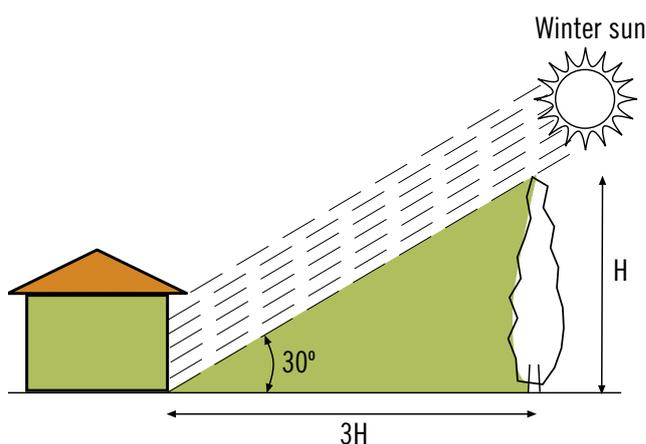


Figure 10. Landscape plantings on northern side of dwelling

G Management

G1 Bushfire Protection

Bushfires affect the Tumbarumba Shire. The Guidelines contain relevant provisions that aim to manage bushfire risks. Comprehensive details relating to bushfire management and property security can be obtained from the Tumbarumba Shire Council and the local Khancoban Bushfire Brigade.

However, there are basic principals of design, construction and landscaping that should be followed when planning your residence.

G2 Bushfires and House Construction

Buildings

All buildings including garages, carports and outbuildings are to be built in accordance to the requirements of Australian Standards AS 3959—Construction in Bushfire Prone Areas and Bushfire Category C guidelines. Includes provision for the following, where appropriate:

- Provision for R2.5 insulated batts to external walls within the dwelling and R4.0 insulated batts or equivalent in the roof structure.

- Provision for leaf guards to all gutters.
- Appropriate sarking to underside of roof tiles, where used.
- Provision for vent spark arrestors on all weep holes.
- Use of metal gauze screens to all window openings and external doors.
- Use of anti-flap pads and Prestite, where required.
- Steel or corrugated iron fencing, to act as a natural firebreak or retardant.

In general, using the recommended building setbacks and non-use of readily combustible materials in the building envelope and ancillary structures will be your main bushfire protection.

Similarly, when developing your Landscape Plan, ensure that large combustible trees and shrubs are keep out of the immediate building envelope zone and that rubbish or garden waste is not allowed to accumulate in combustible quantities.

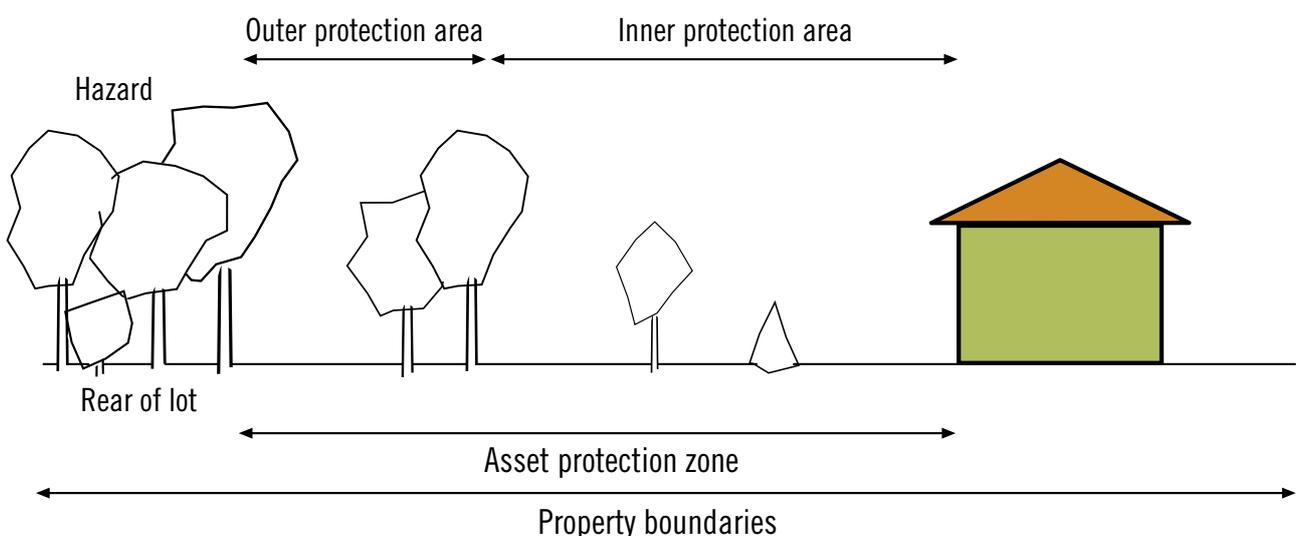


Figure 11. Bushfire protection, especially for blocks on northern edge of Khancoban Alpine Estate

G3 Management of Water

The Design Guidelines seek to ensure the conservation of water within the **Khancoban Alpine Estate**. Where possible native planting is preferred with Buffalo Palmetto as the turf grass if required, which will consume minimal water compared to exotic planting.

Grey Water

Although there is ample water in Khancoban, grey water usage should still be considered, especially for use in the garden. Low cost systems are now available for storage of laundry and kitchen wastewater with gravity feed irrigation to the garden.

Provision for grey water plumbing is best provided at the initial Design Stage to minimise costs and provide ease of installation.

Rainwater Tanks

Rainwater tanks should also be considered with a minimum capacity of 4000 litres to collect roof water. These may be stored above or below ground.

Water Conservation

Water conserving devices with an AAA rating should be installed in each dwelling, including tap flow regulators, showerhead roses, washbasins, kitchen sinks and dual flush toilets. The AAA rating is contained in the Manual of Assessment Procedure for Water Efficient Appliances SAA MP64-1995.

H Energy Savings and Cost Efficiencies

H1 Energy Savings Related to Lifestyle

The aim of this document is to assist future residents of **Khancoban Alpine Estate** to enjoy a quality of life that is healthy, environmentally sustainable, of sound investment and financially viable.

In acknowledging building and construction guidelines and regulations established by various NSW Government Departments and Authorities the developers of **Khancoban Alpine Estate** have endeavoured to provide the best level of information to achieve these ends.

As an extension of the considerations of selecting your block, siting your dwelling, utilising passive and active solar energy, insulating and utilisation of energy efficient building materials, we also ask you to consider your appliances and day-to-day energy consumption levels of your dwelling.

Costs saved in utilising the recommendations in the **Khancoban Alpine Estate** Design Guidelines are considerable, and if for example they were to be directed to housing loan repayments, would result in

considerable savings over the life of a standard Home Loan Repayment Plan.

For more detailed information potential purchasers' at **Khancoban Alpine Estate** should visit the Energy Smart Information Centre, website, www.energysmart.com.au.

H2 Energy Smart—Assumptions Used in Energy/Greenhouse Gas Calculations

Calculations for energy and greenhouse savings for the following technologies are based upon the following comparisons and assumptions:

Energy Smart Refrigerator

Top Star Rated Refrigerators save up to \$450 in energy bills and 4.5 tonnes of greenhouse gases (comparison of energy rating labels of most versus least energy efficient 540 litre frost-free refrigerators over 10 years operation).

Energy Smart Washing Machine

Top Star Rated Washing Machines save up to \$450 in energy bills and 4.5 tonnes of greenhouse gases

(comparison of energy rating labels of most versus least energy efficient 6kg washing machines over 10 years operation).

Energy Smart Dishwasher

Top Star Rated Dishwashers save up to \$350 in energy bills and 3.5 tonnes of greenhouse gases (comparison of energy rating labels of most versus least energy efficient 12 place-setting dishwashers over 10 years operation).

Energy Smart Dryer

Top Star Rated Dryers save up to \$150 in energy bills and 1.5 tonnes of greenhouse gases (comparison of energy rating labels of most versus least energy efficient 5kg dryers over 10 years operation).

Energy Smart Showerhead

AAA-rated Showerheads save up to \$1,000 in energy and water bills and 10 tonnes of greenhouse gases (compared to standard 20 litre/min. showerhead over 10 years).

Energy Smart Lighting

Compact Fluorescent Bulbs save up to \$50 in energy bills and half a tonne of greenhouse gases (comparison of a 15 watt compact fluorescent versus a 75 watt incandescent bulb over 8500 hours operation).

Energy Smart Water Heater

Heatpump and solar systems save up to \$2,000 in energy bills & 25 tonnes of greenhouse gases. Efficient gas systems save up to \$650 in energy bills & 5.5 tonnes of greenhouse gases (comparison of most energy

efficient heatpump and solar water heaters versus continuous tariff electric unit in Sydney, and energy rating labels of most versus least energy efficient gas water heaters, both over 10 years operation).

Energy Smart Insulation

Saves up to \$1,000 in energy bills and 10 tonnes of greenhouse gases (comparison of estimates for electrically-heated & cooled, wall & ceiling insulated home (to AS2627) versus uninsulated home under identical conditions, in Sydney, over 10 years).

Electricity

Electricity price is averaged at 10c per kilowatt-hour.

H3 How to Save On Your Energy Bills

The *Energy Smart–Energy Conservation* booklet clearly outlines the savings that can be obtained by the selection of appliances and energy management of your home.

Using less energy also means less pollution and reduced greenhouse gas emissions. So start now and build energy saving devices into the original design of your dwelling and save hundreds of dollars on energy bills.

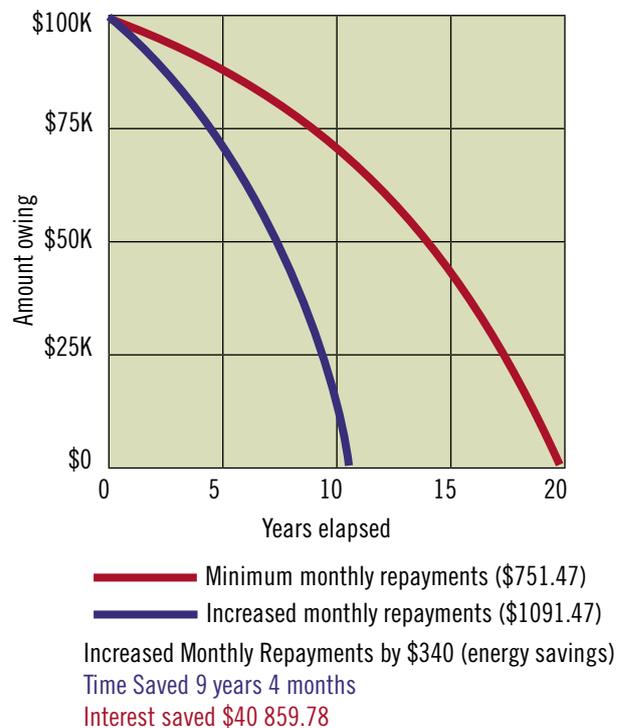
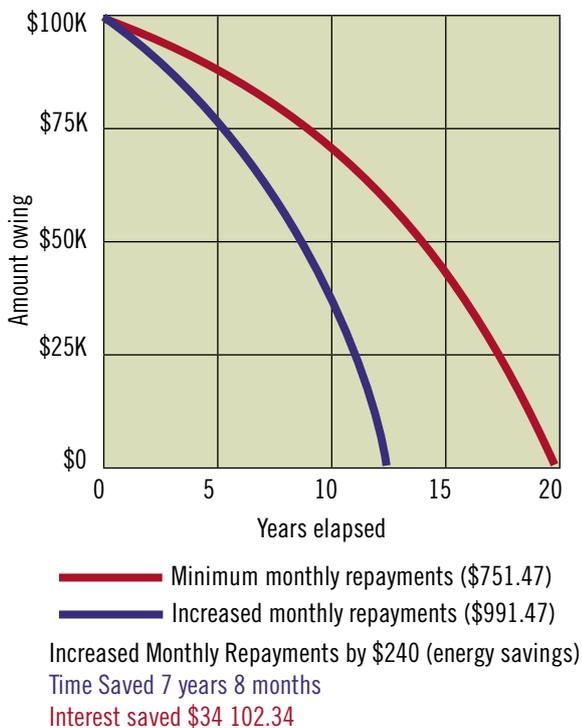
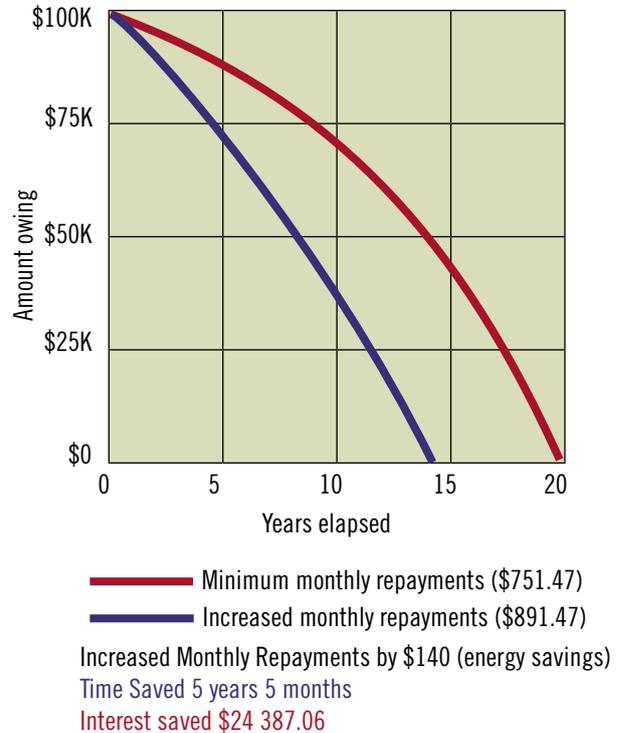
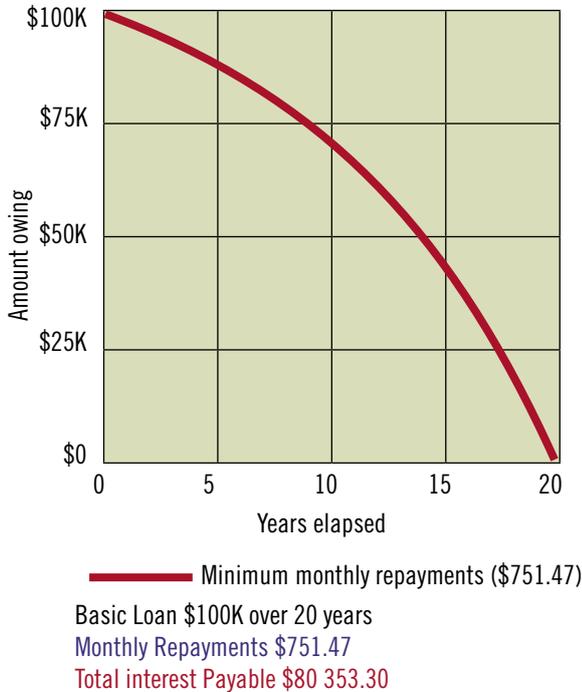
Utilising quarterly energy savings and converting them to the average Home Loan Repayment Account would result in a considerable reduction in the term of your Loan. Refer also to, *Other Fuels and Appliances*, *Buying a New Appliance*, *The Greenhouse Effect* and the *Energy Services and Advice* sections of the *Energy Smart–Energy Conservation* booklet.

Room	Average Energy/Winter 1/4 Cost	High	Low
Living Room	\$128	\$360	\$ 52
Kitchen	\$75	\$140	\$40
Laundry/Bathroom	\$68	\$212	\$28
Bedrooms	\$39	\$146	\$20
Garage/Workshop	\$17	\$39	\$13
Car/Fuel Costs	\$269	\$718	\$182
Totals	\$596	\$1615	\$335

Example of Savings on a Standard Home Loan Account

If you have an average energy usage of \$2384 p.a, using average optimum appliances as specified by SEDA, compared with a household with maximum energy usage of \$6460 p.a, the cost savings for you would be \$4076 p.a or \$340 per month. If this amount

was applied to a \$100,000 housing loan with usual monthly repayments of \$780 per month for 20 years, i.e. an extra \$340 per month was paid, the new monthly repayment to \$1120 per month, the 20 year loan term would be reduced to 10 years and 8 months and a savings of \$44,390 would be made in interest payable.



These savings calculated as of July 2004 on the Bendigo Bank website at 6.60% interest per annum.

Refer to your bank for latest rates.

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Langdon, Phillip and Steuteville, Robert, *New Urbanism: Comprehensive Report and Best Practices*, 3rd Edition, New Urban News 200?

Websites

iPlan BASIX, www.iplan.nsw.gov.au

Bendigo Bank, www.bendigobank.com.au

Armidale Dumaresq Council,
www.armidale.local-e.nsw.gov.au

Where to get help

Australian Greenhouse Office

www.greenhouse.gov.au

Building Designers Association of Australia

www.bdaa.com.au

Department of Urban Affairs and Planning

www.duap.nsw.gov.au

Energy Smart

www.energysmart.com.au

Housing Industry Association

www.pathe.com.au

Royal Australian Institute of Architects,

www.raia.com.au

Sustainable Energy Industries Association,

www.seia.com.au

Tumbarumba Shire Council

www.tumbashire.nsw.gov.au

Glossary

BASIX The NSW Government target for sustainable residential development.

FSAZ Flexible Solar Access Zone

HMB House Energy Rating Management Body

MSAZ Minimum Solar Access Zone

NatHERS National House Energy Rating System. Developed by the CSIRO.

R1.0, R2.5, R4.0 Australian Standard insulation rating measurements.

SEDA Sustainable Energy Development Authority, now part of NSW Government Energy Ministry.

Solar Access This relates to the maximum utilisation of the sun's energy on your block and dwelling.

Solar Access Zone Refers to a reserved area of your block that protects the solar access to outdoor living spaces and internal living areas.

Produced by Samanita Developments Pty Ltd, © 2004

Contact:

Level 3, 187 Macquarie Street

Sydney NSW 2001

Telephone: +61 2 9232 5922

Fax: +61 2 9232 5933