

Beltana

State heritage area: guidelines for development



**Government
of South Australia**

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Environment and Water

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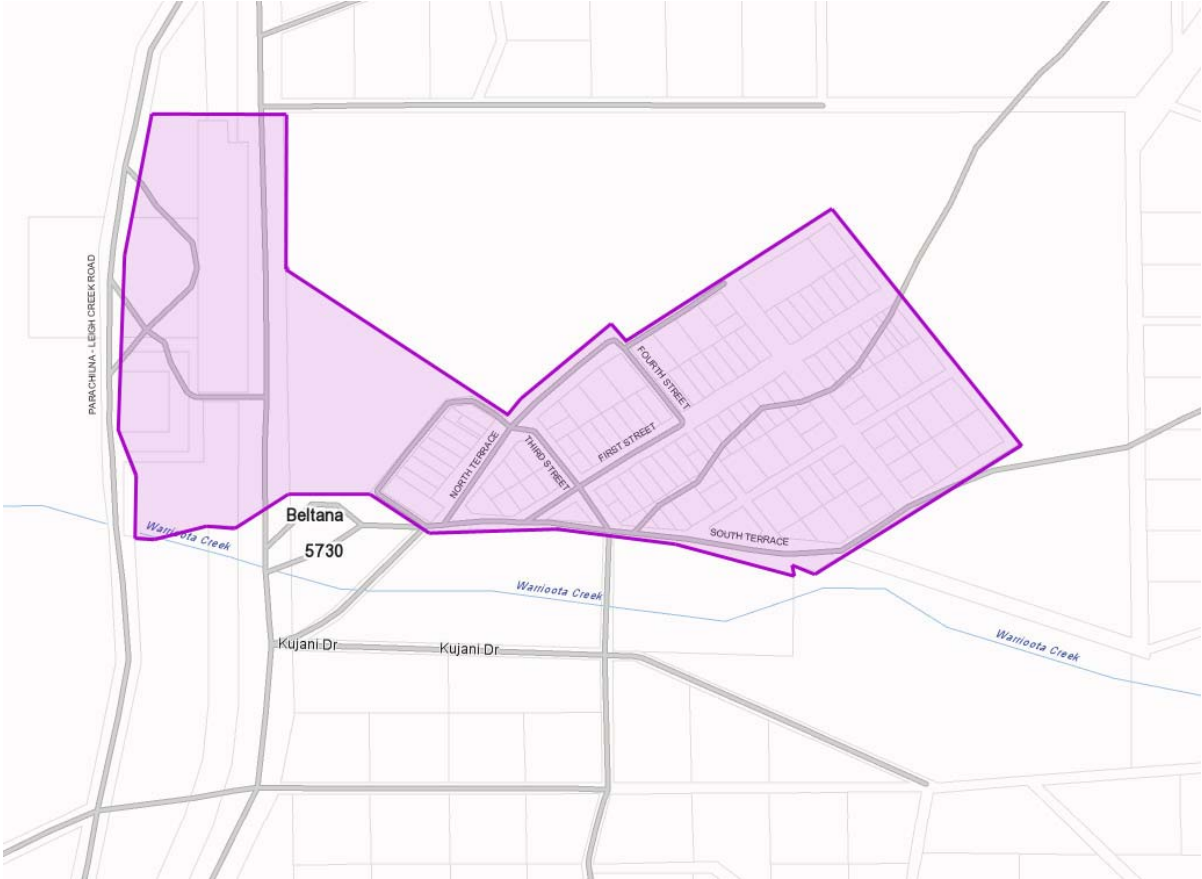
Beltana State Heritage Area - DEW # 13886

SHA declared in 1987

The information in these Guidelines is advisory, to assist you in understanding the policies and processes for development in the State Heritage Area. It is recommended that you seek professional advice or contact the relevant State Heritage Adviser at the Department for Environment and Water (DEW) regarding any specific enquiries or for further assistance concerning the use and development of land. Being properly prepared can save you time and money in the long run.

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1. Introduction

1.1 Beltana State Heritage Area

South Australia's State Heritage Areas represent significant aspects of the State's rich natural and cultural heritage. Beltana was designated a State Heritage Area in 1987. The designation of a State Heritage Area is intended to ensure that changes to, and development within the area are managed in a way that the area's cultural significance is maintained.

The historic settlement of Beltana is located near Warioota Creek in the western fringe of the Flinders Ranges, approximately 540 kilometres north of Adelaide, encompassing the surveyed township and adjacent cemetery and railway structures. Beltana is recognised as a State Heritage Area because of the town's link with important episodes in the history and development of South Australia's inland regions. The area has cultural heritage value to Australians of Aboriginal, European and Afghan descent.

State Heritage Areas are subject to special protection due to their cultural significance to South Australia. The following Development Guidelines for the Beltana State Heritage Area are intended to provide advice to current and prospective property owners and residents about conservation and appropriate development in the historic township.

1.2 Purpose of Guidelines

These guidelines have been prepared to assist property owners who wish to carry out changes to places within the State Heritage Area. The guidelines identify the heritage significance of the area and provide guidance in relation to:

- When development proposals are required for approval
- How to conserve, maintain and repair historic buildings, structures and ruins
- Appropriate alterations and additions to historic buildings and structures
- Site and location of new development
- Change of use.

The Development Guidelines are a reference document, and all development proposals will be assessed on their merits through the development approval process.

1.3 Getting Approval

Where changes within the Beltana State Heritage Area involve actions that constitute 'development' a statutory approval against the planning and building rules is required. An application for approval of development in or affecting the Beltana State Heritage Area is lodged with the Development Assessment Commission. Note that exemptions that might apply elsewhere do not apply in the State Heritage Area.

For State Heritage Areas, 'development' as defined by the Development Act includes:

- Land division
- Change of use
- New construction
- Demolition, removal, conversion, alterations, additions and painting
- Signage
- Any other work that could materially affect the heritage value of the State Heritage Area

All development applications in the State Heritage Area that are lodged with Council will then be referred to Heritage South Australia in the Department for Environment and Water (DEW) for heritage assessment.

A checklist to guide you in preparing documents for a Development Application can also be found on the DEW website.

1.4 Seeking Heritage Advice

Getting the right advice on conservation methods is essential to preserving the heritage values of a place. Initial conservation advice can be obtained from heritage architects in Heritage South Australia or by contacting the Council. If you are planning to undertake development in the area, you are also encouraged to seek preliminary advice from Heritage South Australia or the Council.

For more detailed advice in relation to conservation issues, design advice for alterations and additions, property owners may wish to contact a suitably qualified heritage consultant. An experienced heritage consultant can help you plan the works and prepare the necessary documents required for approvals.

There are also various publications that are designed to assist property owners in planning conservation works and preparing a development proposal. They include:

- SA Guide to Developing State Heritage Places
- Heritage Impact Statement Guidelines for State Heritage Places.

2. History and Significance

2.1 History

The land around Warioota Creek was first taken up by John Haines in 1855, and later in 1867 amalgamated into the substantial holdings of the Beltana Pastoral Company of Thomas Elder and Samuel Stuckey. During 1866 Elder and Stuckey imported over 100 camels with Afghan drivers, which formed the basis of transport in the district and further north for decades.

The discovery of copper at Sliding Rock in 1870 prompted the construction of Martin's Eating House, later to be replaced by the Beltana Hotel, on the road to the mine at Warioota Creek. This location at the creek crossing had already been chosen as a site for a repeater station for the Overland Telegraph, which reached Beltana by 1871. The Beltana township was surveyed in 1873 and a purpose-built repeater station erected by 1875.

Beltana boomed with the arrival of the railway in 1881, and with an influx of mining families following the failure of the nearby Sliding Rock copper mine. By the mid-1880s the town had its own brewery, general store and a school. In the 1890s the Presbyterians established a mission at Beltana, with the Reverend John Flynn acting as the local minister for the area in 1911. In 1919 the Australian Inland Mission opened a nursing home at Beltana. The town's population stabilised at about 150 and remained fairly constant until the 1920s. By the 1940s, 64 trains per week were passing through Beltana along the Marree-Oodnadatta-Alice Springs line.

The development of the coal-mining town of Leigh Creek during the 1940s and 50s, the realignment of first the railway (1956) and later the main road (1983) led to Beltana's decline as a major service, transport and communication centre for the region.

2.2 Significance

People of Aboriginal, Afghan and European descents all regard Beltana as an important place in their cultural heritage.

The Adnyamathanha, among other Aboriginal people, are acknowledged as the first inhabitants of this area. The Beltana State Heritage area has many significant memories and associations for both traditional Aboriginal occupation (such as the red ochre trade route) and events marking Colonial settlement.

The township of Beltana is historically important for its links with pastoralism, the Overland Telegraph, the Transcontinental Railway, mining, outback services and the Australian Inland Mission. Of added significance are the Afghan sites that reflect another phase in Beltana's past as an important camel-based transport centre of the nineteenth century.

2.3 Character and Setting

Important to the historic character of Beltana is the overall 'townscape'. While individual buildings and places have historic merit and their own appreciable characteristics, it is the town's layout and the location and type of buildings that contribute to its outback character.

The rugged visual setting and the small and simply designed buildings are reflective of the early settlement of South Australia's inland. These elements reveal the hardships faced by early pastoralists, miners, developers and settlers.

Surviving within the Beltana State Heritage Area are many buildings and places that illustrate the historical themes that dominate the town's past and contribute to its heritage significance. These include:

- Telegraph Repeater Station (1875)
- Railway Station Complex (1881)
- Beltana Hotel (1874)
- Royal Victoria Hotel (1878)
- Police Station and Cells (1881)
- Buttfield's Store Ruins (1887)
- Mitchell's Manse (1894) – subsequently the A.I.M. Nursing Home
- Smith of Dunesk Mission, formerly Daig's Coach Works
- School (1893)
- Cemetery

There are several cottages, some substantial ruins and a number of fragmentary elements, such as fireplaces, wells and a baker's oven, scattered over the area. Significant water supply structures include the railway dam and a government well and concrete trough dating from 1917, which provide good examples of the original infrastructure of the area.

Climate

The area is characterised by a hot climate with erratic rainfall. Though droughts occur, Beltana has an average rainfall of 215mm per annum spread throughout the year. Highest monthly rainfall often occurs in the summer months of December, January and March.

Average maximum temperatures recorded for each month range from 17- 35°C, and average minimum temperatures from 5- 21°C. The average number of days over 30°C in January is 27. At their extremes temperatures can range from over 45°C in summer to a low of -1°C in the winter months.

Development in Beltana needs to address certain climatic factors associated with the region. Consideration needs to be given to winds affecting the topography and potential funnelling that can be exacerbated by the rugged landscape of the area. Further provisions should be made for adequate water collection, insulation, and protection from the sun and wind.

Topography, geology and soils

Beltana is situated about 250m above sea level on the northern gently sloping banks of Warioota Creek. The main Flinders Ranges are to the east with Red Range to the southwest and Mt Bayley Range to the northwest. Warioota Creek drains westwards into Lake Torrens.

The soils are derived from weathering of the sedimentary deposits of the Umberatana Group with some evidence of the Burra Group and Cambrian deposits. At the lower levels the ridges of shale, siltstone and limestone become more rounded producing shallow reddish calcareous loams with outcropping rocks.

As a result of this site implication, further professional/engineering advice should be sought to encourage appropriate and structurally sound development.



A view across part of Beltana

Vegetation

Indigenous vegetation in the northern Flinders Ranges is adapted to climatic conditions and generally poor skeletal soils with high salt contents. The vegetation therefore has the ability to respond to extreme weather conditions of heat and drought. Ephemeral species react quickly to flooding, human intervention and animal management.

Warioota Creek, with deeper soils is lined by river red gum (*Eucalyptus camaldulensis*) woodland with a ground cover of sedges and rushes in areas where drainage is impeded. Other species found include, *Callitris glaucophylla* (white cypress pine) and *Dodonaea viscosa subsp. angustissima* (narrow-leaved hop-bush).

The vegetation of upper northern slopes of Warioota Creek throughout the township consists of saltbush communities, which flourish in areas of low rainfall and shallow soils. The dominant species are *Maireana astrotricha* (low blue-bush), *Maireana pyramidata* (shrubby blue-bush or sago bush) and *Atriplex vesicaria* (bladder saltbush). Other species that may be found include *Sclerolaena* subsp, *Enchylaena tomentosa* and *Acacia victoriae* with a few exotic ephemerals.

3. Conservation of Historic Structures

3.1 Conservation, Maintenance and Repair

The first step in conserving a building is to learn as much about the building as possible. Who lived there and how the place was used? Are there any old photographs in the local history collection? Research and analysis of the building allows the heritage value (cultural significance) of the place as a whole and of each particular part to be better understood. The heritage value will guide what repair work can or should be done and which work is most urgent.

Historic photographs, early rates records, certificates of title, local publications and heritage survey information can be of assistance in learning about the history of a place. Your Local Council or local historical society may have a local history collection to assist in researching. There are also online research tools, such as Trove and the Australian Dictionary of Biography.

Historical information, along with the physical appearance of the building, its built fabric, layout, former uses, its inhabitants and changes over time, provide an understanding of the place and how it evolved, so that informed decisions can be made about how to approach the conservation process. Even surface finishes can have heritage value: some early building timbers were hand sawn in a local sawpit. Each saw mark that remains clearly visible tells part of the story of the place. Overzealous restoration can inadvertently destroy the qualities of the place.

Structural safety is always the first priority, but keeping water out and away is essential for all buildings. Other risks to your building like fire or termites should also be considered and actively managed.

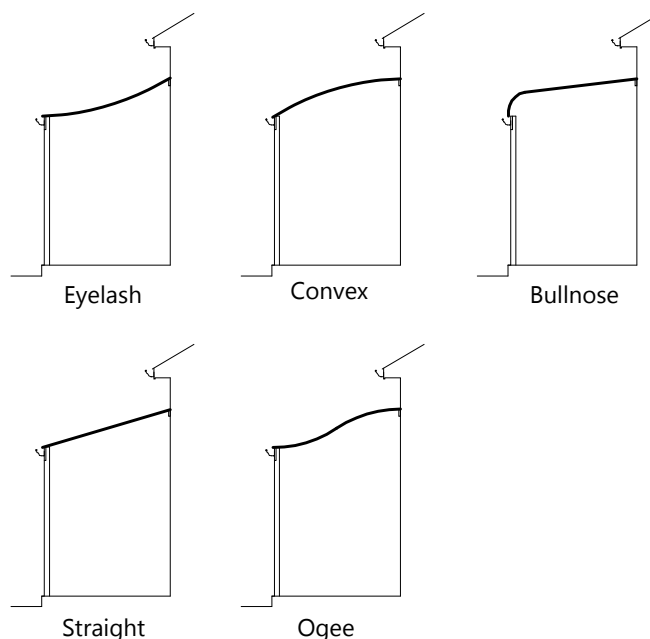
Before starting any work on older buildings, you should identify and address any hazards such as asbestos containing materials and lead paint. Almost all old paints contained lead. They present no risk while the paint is sound and is not disturbed. Lead is released into the environment when paint flakes off, is dry sanded, burnt off or is otherwise disturbed. All hazardous materials must be carefully and properly handled and disposed of to protect you, your family and the environment.

Suitably qualified heritage consultants can provide expert advice to guide the conservation of your place.

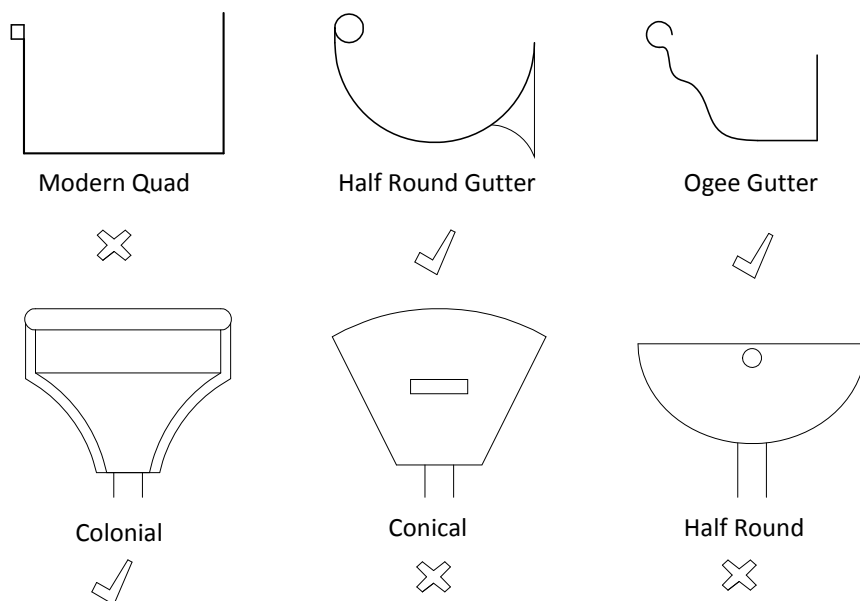
Replacement or repairs to roofs, gutters and downpipes

Traditional form and eave profiles should be retained. Evidence of original timber shingles within roof spaces should be retained, with new roofing fixed over original material. Materials closely consistent with early materials such as galvanised corrugated iron should be used. Zinalume sheeting shall not be used.

Verandahs, including posts should be reinstated to original or appropriate form and detailing where sufficient evidence exists. Decorative elements such as cast iron lacework should not be installed on buildings where this never existed.

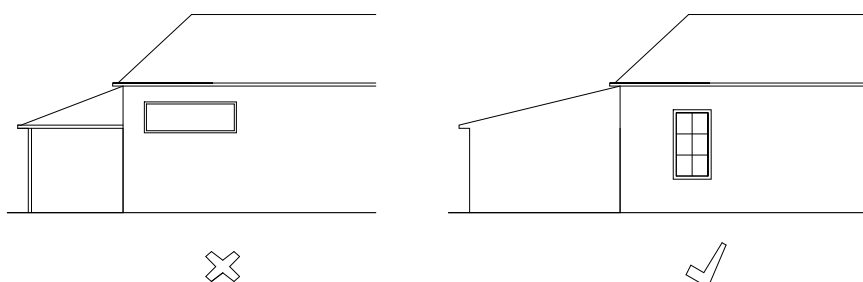


The profile, finish and material of gutters and downpipes should be closely consistent with the original form; Guttering and round down pipes should be galvanised iron and should match existing materials, retaining as much of the original building fabric as possible for as long as possible.



Windows and Doors

The design of windows and doors is a good indicator of the age of a building, and the original should be retained wherever possible. If replacement is necessary it should match the original, as incorrect window and door replacements can significantly reduce the integrity of a building. Windows and doorways that are 'vertically proportioned' (that is, narrower rather than wider) and small in size are an important feature of Beltana.



Reconstruction and Additions

Reconstruction of demolished or collapsed parts of the building should follow the pattern of the original, but there may be opportunity to incorporate changes and extensions.

Additions to an existing building can form part of the overall conservation strategy by making the place more useable. They could take the form of a simple verandah, a new outbuilding or a relatively large lean-to extension. See Section 5 'New Development' for detailed advice on new construction in Beltana.

Original Finishes

Decay of pointing and stonework is most commonly due to rising damp from below, or from leaking gutters and downpipes concentrating water to a particular point. In conservation work it is vital to ensure all water is directed away from the building.

As the heritage buildings in Beltana typically have damp proof courses, pointing of masonry must be maintained to prevent deterioration. It is important that soft, lime-based mortars are used for re-pointing. Mortar that is softer and more porous than the surrounding stone will preserve the stone by acting as a sacrificial material. Harder cement mortars are inappropriate because they resist moisture absorption, and as a consequence concentrate evaporation through the stonework. Dissolved salts will crystallise in the stonework causing decay. Use of lime-based mortar may lead to more frequent re-pointing (e.g. every 10 to 15 years), but its use is essential for the protection of stonework that is much more costly to replace.

Where replacement materials are necessary, stone of a type and colour as close to the original should be used.

The most common problems with walls of these materials result from decay of the supporting timber due to termite infestation and rot. Replacement timbers should be the same dimensions and type. Replacement with steel framed structures may be appropriate in some cases.

Weatherboards should be maintained with regular painting.

In cases where dwellings are constructed from corrugated iron and the integrity of the iron is far-gone and beyond repair, the affected areas should be patched using recycled materials or a similar material if it can be sourced new.

3.2 Management Approaches to Heritage Ruins

There are generally five different management approaches to heritage ruins, as specified in the Australian Government; *Guide to Conservation and Management of Ruins, 2013*. Some places may require a combination of these approaches or a unique approach may need to be developed.

The approaches are:

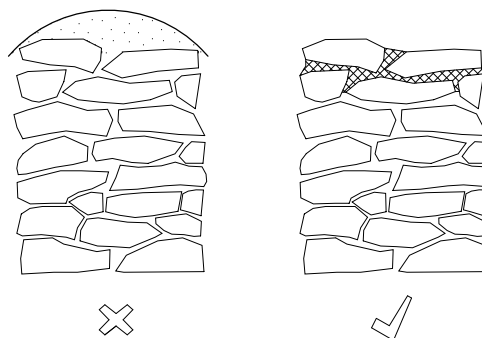
- Coming alive again
- Returning it to its former state
- Simply maintain
- Letting nature take its course
- When removal is inevitable

Each approach involves specific types of conservation action and a different level of intervention. A decision as to which approach to take must be guided by careful consideration of the significance of the place and analysis of its social, economic and environmental setting.

Within Beltana there are many ruins, particularly old stone fireplaces, which are often all that remains of small cottages with pug and pine walls. As Beltana is a State Heritage Area these ruins are protected and work may only be carried out on them if it is supported by a development application. The following actions are important in looking after ruins:

Stabilisation: This involves conserving the structure as a historic site and usually involves re-pointing stonework (particularly areas affected by rising damp) and replacement of missing stones. This work is usually undertaken to make the site safe and ensure the building's survival for possible later use or interpretation.

Stabilising the tops of stonewalls and chimneys to prevent the penetration of rain.



Avoid capping over the top of the wall with mortar. As shown in the above diagram, the preferred approach is to repoint the joints to run water away and prevent its soaking into the core of the wall.

Conservation and Adaptation: Depending on the nature of the ruin, it may be possible to undertake conservation and rehabilitation work and re-use the ruins in an innovative way, such as a tourist attraction or part of an outdoor museum display.

Original fireplaces can also be used in the construction of new cottages.

It is important that stones, other original materials and artefacts are not removed from these sites, in order for such items to be

available for interpretation and re-use.

Professional advice should be sought for any work on ruins, particularly where a ruin has collapsed or been disturbed. Advice can be provided by professional heritage advisers and conservation architects, and is also available from the Department for Environment and Water (DEW) on (08) 8124 4960 or dewheritage@sa.gov.au.



An Adapted Cottage with Ruins in the Foreground

4. Guidelines for New Development

Individual buildings and places in Beltana have historic merit and their own appreciable characteristics. However the overall layout, location and type of buildings also form a distinctive and historically significant townscape character. New development in Beltana should respect this character, and should conserve and protect the historical and cultural significance of the town as a whole.

The following sections provide specific guidelines as to how new development in Beltana should be approached.

4.1 Change of Use

The best way to conserve a heritage building or structure is to use it. Any change of use should aim to retain a place's historic character, retain a sense of its original use, conserve significant fabric, but may also include the sensitive inclusion of new services and alterations to make it functional and sustainable.

A place's adaptive reuse should consider whether traditional materials are reused in place of new materials. Some traditional materials may be more expensive than modern materials, but they may last longer.

Some interior fabric of a place may be significant and important to retain when adapting a place, such as joinery and fireplaces.

4.2 Land Division

The division or realignment of allotments is considered development, and requires development approval. Beltana has an essentially open character with most buildings located well within their site boundaries. New buildings should follow this pattern, and be positioned more or less centrally between the boundaries. Variations in site conditions such as the location of ruins and topographic variations may affect this general rule. Outbuildings were often built along the side or rear boundaries and well back from the street.

Parcels of land within and surrounding the township of Beltana are Crown Land. For further information regarding the purchase and development of land in Beltana contact Crown Lands' Port Augusta Regional Office on (08) 8648 5300.

4.3 Scale and Form

Original buildings in Beltana were simple in design and constructed using materials such as galvanised iron, timber and stone. Other than the town centre, the scale of original buildings was small. More substantial buildings in the town centre are simple structures with uncomplicated detailing. There are no buildings with elaborate finishes and detailing in Beltana, any new buildings should reflect and complement this characteristic.

Size

Most cottages and dwellings in Beltana are approximately 30-60 square metres in floor area. New buildings should be of a similar size to maintain character and consistency. Larger buildings are uncharacteristic in the town unless designed for a specific use, such as the Victoria Hotel or the original Buttfield's Store. If a building of this scale is contemplated, then the only appropriate place to locate it would be in the town centre.

A building with a larger floor area may be achieved elsewhere in the township by repeating the outline of a smaller unit, or collectively forming a group of smaller buildings linked by a veranda or lean-to. This will maintain the small-scale pattern while achieving a larger floor area.

Scale

The scale of buildings in Beltana varies depending upon their original use. For example, the larger buildings, which include the Victoria Hotel and Railway Station yards, have higher ceilings and steeper roofs which add considerably to their apparent mass. The old school is relatively small, with high ceilings and a steep roof pitch that allows it a larger bulk than cottages of a similar area nearby.

Smaller cottages with low ceilings feature throughout the township, with the possible exception of the town centre. New buildings should be of a similar scale.

Roof Shape and Pitch

Roofs in Beltana are as a rule either:

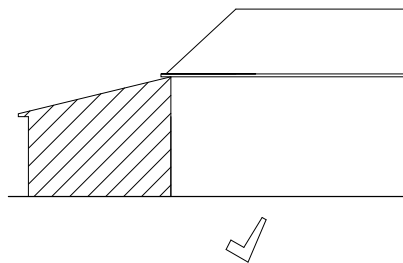
- Steeply pitched simple gable ended,
- With lean-to (skillion) and veranda extensions of a gentler pitch, or;
- Lower pitched simple hipped roofs, also with lean-to and veranda extensions.

Out-buildings are generally smaller versions of these basic forms or have simple, low, mono pitched roofs.

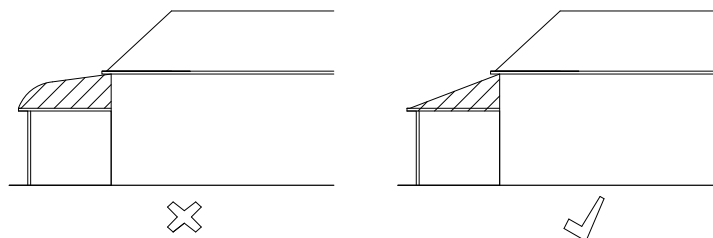
4.4 Alterations and Additions

Verandah and Lean-to Construction

Verandah and lean-to construction in Beltana are simple in design, with angled roof lines of a shallower pitch than the building to which they are attached.



Elaborately designed, 'bullnose', or 'eyelash profile' style verandahs and decorative 'lace work' are not in keeping with the simple design of the older buildings and cottages in Beltana.



Generally all or part of the verandah is enclosed to form a lean-to. These additions should not have a floor area larger than the existing building. Where possible the natural slope of the ground can be used to gain ceiling height. The floor to ceiling heights of new additions should either match or be lower than the existing floor to ceiling heights of the building.

Outbuildings and Smaller Structures

There are a considerable number of outbuildings and smaller structures associated with existing buildings and cottages in Beltana. Some of these structures illustrate the nature of early settlement in outback Australia. Structures include sheds, toilets, windmills and rainwater tanks, and more recently satellite dishes, and solar panel air conditioners.

Sheds and garages

These buildings are usually smaller versions of the cottages they serve or small, low mono pitched structures. Buildings with gable ends should generally have a roof pitch the same as the main building. Prefabricated sheds and garages commonly have inappropriate low roof pitches therefore a steeper pitched roof using corrugated galvanised iron must be specified.

Pumps, septic tank covers and small sheds

Installations such as water pumps and septic tank systems should be concealed, preferably with traditional iron sheeting or stone, or behind native vegetation. Small constructions can be made of traditional iron sheeting or stonework.

Windmills, wind generators and rainwater tanks

Windmills, wind generators and rainwater tanks are characteristic features of the townscape and their use is encouraged where appropriate. Rainwater tanks other than corrugated galvanised iron should be located unobtrusively, concealed with planting and finished in darker neutral colours. Smaller sized rainwater tanks are preferred. If greater capacity is required, clusters of small tanks are preferable to large tanks. The use of new materials and modern versions of these structures such as plastic rainwater tanks and prefabricated Zinalume garages should generally be avoided.

Simply designed windmills of timber and/or steel construction are preferable.

Transportable Buildings

The use of transportable buildings within Beltana should conform to the standards set for other new building work. This precludes many of the 'off the shelf' transportable buildings and also those of a type located in settlements such as Leigh Creek. Small cottages in Beltana could easily be replicated in a transportable form as described in these guidelines. Features to consider include:

- Appropriate roof pitch (minimum of 25°)
- Size that is comparable to existing cottages (30 - 60m²)
- Single pitch, simply styled verandas
- Vertically proportioned, small, timber windows
- Appropriate neutral exterior materials and finishes. Natural timber finishes are preferred.

4.5 Materials, Finishes and Colours

Materials for new buildings used should complement the predominant character of State Heritage Area. Traditional building materials consisted mainly of limestone (often lime-washed), galvanised corrugated iron roofs and timber barges, fascias, doors and windows.

The scarcity of materials at the time of settlement in Beltana is reflected in the original buildings with the use of local materials such as native pine and local stone (both quarried and field stones) and improvised sheet metal (from flattened kerosene cans). Corrugated iron was the only practical roofing material and was used and re-used for roofs and walls.

New buildings should not slavishly replicate traditional building details. So-called heritage features, such as imitation bluestone (slate veneer), reproduction cast iron decoration, false glazing bars and leadlight to principal windows, are inconsistent with the historic character of the area. Second hand materials in good condition should be incorporated for new construction where practical. If this is not possible, use materials that complement or match the original.

The aim should be to complement the dominant colour and texture of the materials of heritage buildings in the area. Use simple materials such as natural render, brick or corrugated galvanised iron (not Zinalume).

Suitable masonry finishes include appropriate face stonework or cement rendered brickwork. Face block-work, fibre cement sheet or texture coated render finishes are not suitable. Weatherboards should be of timber.

New walls of extensions to buildings may be stone to match the original part of the building, or alternatively may be framed walls clad in corrugated galvanised iron or timber boarding or may utilise other appropriate traditional methods of construction for the area.

New roof cladding, finishes and details should be consistent with the original age and materials of the buildings in the same street. Steel columns, barges and fascias are not appropriate.

4.6 Preferred Construction Materials and Methods

The materials and finishes used in new buildings will play an important part in the retention of the distinctive character of the township.

The scarcity of materials at the time of settlement in Beltana is reflected in the original buildings with the use of local materials such as native pine and local stone (both quarried and field stones) and improvised sheet metal (from flattened kerosene cans). Corrugated iron was the only practical roofing material and was used and re-used for roofs and walls.

Second hand materials in good condition should be incorporated for new construction where practical. If this is not possible, use materials that complement or match the original. It is particularly important to use corrugated iron of the same profile (custom orb) and finish (galvanised) to ensure that the texture and colour is consistent. Galvanised iron, although bright when new, tones down to a dull grey, matching existing. Zinalume does not weather in the same way and if used should be painted an appropriate colour. Colorbond is an alternative that can be negotiated with the Department for Environment and Water (DEW), however if this material is deemed as appropriate and is to be pursued, the colour choice is very important and needs to be complementary to the existing township.

<i>Type of Work</i>	<i>Preferred</i>	<i>To Be Avoided</i>
Roofing	<ul style="list-style-type: none"> Galvanised corrugated iron Steep roof pitch, around 30°-40° with hip roof form Simple roof form Timber barges and fascias 	<ul style="list-style-type: none"> Roof tiles or other heavy weight materials Zinalume Steel barges and fascias
Gutting and downpipes	<ul style="list-style-type: none"> Ogee or half round gutter profiles Circular downpipes 	<ul style="list-style-type: none"> Modern quad gutter profiles Rectangular downpipes PVC downpipes
Exterior walls	<ul style="list-style-type: none"> Limestone, often lime-washed 	<ul style="list-style-type: none"> Natural render for new buildings
Exterior painting	<ul style="list-style-type: none"> Natural stone colours 	<ul style="list-style-type: none"> Bright whites and high saturation colours Painted masonry
External doors and windows	<ul style="list-style-type: none"> Timber doors and windows 	<ul style="list-style-type: none"> Leadlight to principal windows on new buildings
Verandah posts and details	<ul style="list-style-type: none"> Thick chamfered timber posts 	<ul style="list-style-type: none"> Reproduction cast iron decoration Dutch gables and finials Steel columns
Verandah roofing	<ul style="list-style-type: none"> Concave and Bullnose profiles Galvanised corrugated iron 	<ul style="list-style-type: none"> Ogee profile
Verandah floors	<ul style="list-style-type: none"> Lime slabs Compacted earth Slate slabs 	<ul style="list-style-type: none"> Tessellated tiling
Fences and gates	<ul style="list-style-type: none"> Simple, not highly decorative fences Picket and paling fence Wire and picket fence Timber fence and hedge Vertical corrugated iron fixed to posts and rails (side fence) Hardwood palings 	<ul style="list-style-type: none"> Treated softwood (suitable if painted) Colorbond, Zinalume and horizontal custom orb Solid front fence, such as brush, masonry, metal panels or tubular fencing

4.7 Signage

A distinguishing feature of Beltana is the lack of signage. Retaining this feature of the township is desirable and where possible signage should be small and kept to a minimum.

Whether for advertising, tourist information or heritage interpretation, all signs erected in Beltana require Development Approval. It is recommended DEW be contacted prior to the lodgement of a development application for signage, in which case conservation and design advice can be given at an early stage, thereby limiting delays in the process once an application for development approval is lodged.

Existing or additional "keep off" signs on private property are acknowledged as necessary for individual privacy and security.

Advertising

If a retail outlet is established, new signs should be designed to complement the historic features of the building and township. Any new signs proposed should be in keeping with setting, scale and character of the immediate area. The placement of brightly coloured and illuminated signs is discouraged, along with large signs exhibiting elaborate lettering and design details.

Interpretive signs

Well-designed plaques and interpretative signs telling the history of Beltana or explaining a historic feature are encouraged. The development of a general conservation ethic by providing information about the town and its past to visitors is a positive step towards the promotion of the heritage significance of Beltana and the surrounding region.

Road signs

One of Beltana's characteristics is the lack of road signs. Excessive road signage would detract from the township and the introduction and design of new signs should be carefully considered. Well located interpretive signage could serve a dual purpose of providing directional as well as historical information.

4.8 Landscape, Gardens and Fences

Landscaping

The character of Beltana is framed by its un-sealed roads and typical saltbush vegetation communities, along with an absence of commercial signage and solid fencing.

Driveways and footpaths

Driveways and footpaths surrounding and servicing cottages and sites should be simple, unsealed and designed to result in minimal disturbance to surrounding native vegetation and land form. Due to the fragility of the area, paths and roads should be defined by following vegetation growth. Footpaths and driveways should also be designed, contoured and located to minimise dust and erosion.

Compacted gravel surfaces are encouraged, however care should be taken to ensure that such surfaces allow for adequate drainage and are located away from built structures.

Planting

Given the location of Beltana within the Flinders Ranges and the lack of available water, planting and landscaping using indigenous plant material is encouraged. Vegetation can be used to screen and enhance buildings, for example modern structures and outbuildings such as septic tanks and rainwater tanks.

Stylised gardens and non-indigenous plantings are not in keeping with the 'rugged' character of the township or the character of the surrounding landscape. Often plant beds can be seen surrounded by stones with mulch consisting of local twigs and leaves.

Any planting will be slow to establish and make opportunistic use of climatic conditions. Winter planting, drip irrigation, mulch and plant establishment sleeves will assist early growth. A poor survival rate of plants is likely and opportunities for replanting should be factored in to any proposals.

Guidance should be sought for planting trees and tall shrubs close to buildings. Generally, trees should be planted their mature height away from buildings.

Planting of self-sufficient fruit and vegetables would have occurred in the original settlement in Beltana, and therefore can be in keeping with the town's historic character. Use of pots (washing machine drums etc.) close to buildings would be appropriate.

Fencing

The gentle, hilly landscape edged with wire and timber post fencing presents a distinguishable feature of the town. This minimal fencing style contributes to the open character of the township.

Wire and recycled timber post fencing is encouraged. Preferably, the timber posts should be of recycled native pine or constructed of rough perma-pine posts. In instances where fencing may need repairing individual posts should be replaced rather than an entire new fence.

Stone walling (dry stone wall) and the reconstruction of existing stone walls is appropriate in some locations. Brick walls or cyclone fences are however, inappropriate.

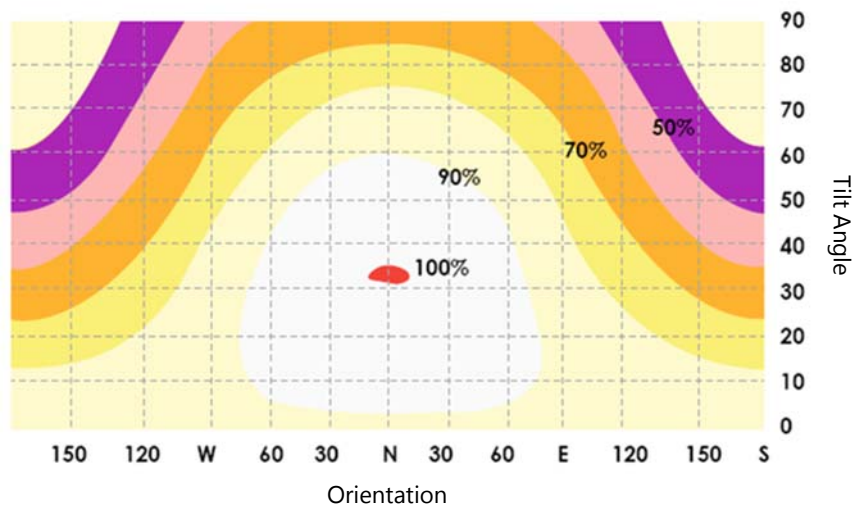
Gates should be made to an open and simple design, constructed in iron or wire finishes. Security screens are recognised as necessary in obtaining contents insurance within Beltana, however intricate aluminium, suburban type screen doors should be avoided. Simpler security screens with minimal "lattice" type patterns are encouraged.

4.9 Solar Panels, Satellite Dishes and Air Conditioners

Buildings within State Heritage Areas can be adapted to include new services and technologies, including solar technologies, and often this can be done with little or no impact on the historic character of the area.

To minimise the visual impact to the streetscape, it is desirable to mount solar panels where they are not visible. This is easily achieved on roof planes facing away from the street or on additions and outbuildings located behind the dwelling.

Placement may pose a problem for dwellings with north-facing main elevations, but solar panels can be effective on east and west faces. The diagram below demonstrates the effectiveness for a range of orientations and tilt angles for Adelaide's latitude.



Solar Panel Tilt, Orientation and Output Variation. Source: www.yourhome.gov.au 2010

Solar panels should be:

- Located on roof planes of the dwelling not visible from the street and sited below the ridge
- Located on sheds, carports, garages or pergolas, where possible, or
- Where there are no roof planes of the dwelling that meet the above criteria, panels on a side roof may be supportable where they are:
 - Well setback from the street and preferably screened by a neighbouring structure or building,
 - A small percentage of the overall roof plane,
 - Located as far as practical on the lower part of the roof,
 - Arranged neatly in a symmetrical group with a margin of visible roof edge around the group.

If these guiding principles are followed, the installation of solar panels will have a minimal impact to the historic character of an individual property, neighbours' amenity, the streetscape and overall historic character of the Beltana SHA.

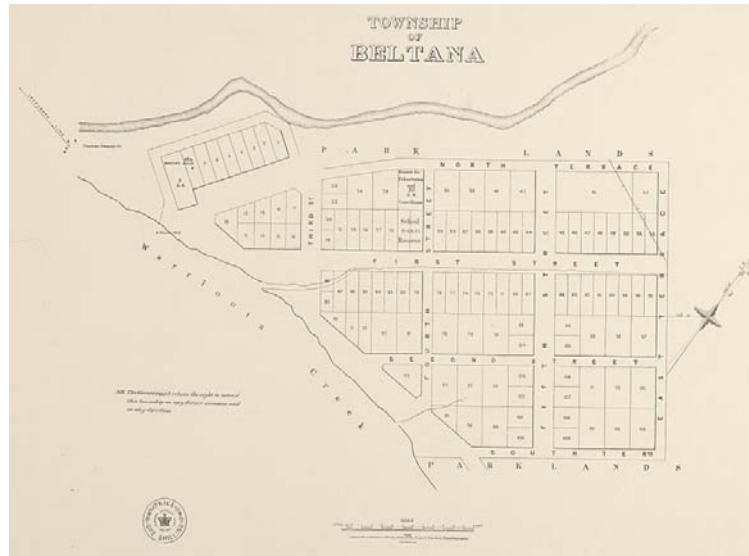
Satellite dishes and aerials should be discreetly sited to have little or no visual impact from the public realm. Ground-mounted locations with concealment planting or roof planes at the rear of buildings are likely to be the best locations.

Air conditioning units associated with historic buildings should be discreetly sited, so as to have little or no visual impact from the public realm. They should be concealed behind roof lines or located out of site on the ground. Pipework should never be installed externally on a wall visible from the street.

4.10 Public Realm

The original plan for the Beltana town centre and surrounds allows for open space and common areas. As such, the treatment of such areas today should reflect Beltana's historic character, siting, and vegetation.

Cattle should be kept out of the township and away from significant structures.



4.11 Services and Infrastructure

The overall planning and development of infrastructure within Beltana is beyond the scope of these Guidelines, but is nevertheless paramount when conserving the historic features of the town. This section provides some insight into the preferred options for infrastructure development in Beltana. Essentially, a common-sense approach and a duty of care towards the heritage aspects of the township should be the prevailing theme behind any development affecting the overall appearance of Beltana.

Overall management and servicing of the town is in part, difficult to identify, as no single agency is responsible for Beltana. This is due to its location being within 'unincorporated' land of South Australia and therefore having no local government authority. Nevertheless, organisations and government agencies such as the Beltana Sport and Social Progress Association, the Outback Areas Community Development Trust and DEW collectively have roles in the future management and development of Beltana.

Electricity

The installation of power lines and stobie poles in Beltana significantly detracts from its historical character, and therefore power lines should be underground, unless significant physical difficulty is encountered in doing so.

Solar power has been used by residents as an alternative to mains supply and successfully integrated into the area.

Water Supply

Water collection in Beltana is the responsibility of each landowner, and is sourced either from bores or by the collection of rainwater.

Any new rainwater tanks, pumps and windmills in Beltana require development approval. The development of these structures in a manner complementary to the historic character of the township.

There are requirements and guidelines to follow when establishing new underground water supplies. More information on underground water supplies and rainwater tanks may be obtained by contacting Public Health SA on (08) 8226 7107 or through their website at www.health.sa.gov.au/phephs.

Effluent disposal

When considering the options for effluent disposal it is important to ascertain a suitable system that is least likely to impact on existing groundwater supplies and the environment. Contact Public Health SA for advice on (08) 8226 7107 or check their website for information sheets and guides.

Road works and footpaths

Compacted and gravelled roads should represent the extent of formalised roadways in Beltana. If it is intended to bituminise or seal roads, then careful consideration should be given to the overall impact of such works on the appearance and aesthetics of the townscape. Certain areas of the Beltana State Heritage Area may benefit from the use of a bituminised road, such as the road link between Beltana and the National Highway. As previously stated however, all proposals will be assessed on merit.

Rubbish collection

There is a new rubbish dump located on the southern edge of the town. Future disposal and possible recycling needs for the community of Beltana should be addressed as part of overall management of the township. The management of the existing rubbish area and the possible siting of any future collection and disposal areas should be fully considered for their visual and aesthetic impacts.

Disused building materials can be reused in new construction or repairs.

4.12 Archaeology

When undertaking new work that disturbs the ground in the State heritage area, consideration should be given to the potential for archaeological deposits to be revealed. Uncovering the footings of a forgotten building or well can be an exciting discovery and important part of the history of the place.

If you propose to excavate or disturb any place, you may need to obtain a permit under the *Heritage Places Act 1993* if you know or have reasonable cause to suspect that the works will or are likely to result in the discovery, damage or removal of archaeological artefacts of heritage significance. Also, if works uncover an archaeological artefact of heritage significance you must notify the South Australian Heritage Council within the period specified in the *Heritage Places Regulations 2005*. For more information on the archaeological potential of your place, contact Heritage South Australia.

Aboriginal Archaeology

Aboriginal heritage and culture is important to Aboriginal people and communities. Aboriginal sites, objects and remains are protected under the *Aboriginal Heritage Act 1988*. Certain landforms are more likely to contain evidence of Aboriginal occupation, such as areas within 2km of coasts and major waterways, areas within 100m of creek banks and lakes, parklands and road verges, and sand dunes.

If you propose to excavate land in South Australia that may uncover an Aboriginal site, approval may be required under the Act. If works uncover Aboriginal sites, objects and remains, the discovery must be reported to the Minister for Aboriginal Affairs and Reconciliation as soon as practicable.

Professional advice may be required from a suitably qualified archaeologist to assist in determining if works are likely to impact on a site, object or remain of Aboriginal importance, and the identification of such matters if uncovered during works.

5. Contacts and Resources

Department for Environment and Water (DEW)

Contact DEW for advice on heritage conservation, grant funding for State Heritage Places and further information regarding the Beltana State Heritage Area.

Phone: (08) 8124 4960

Email: DEWHeritage@sa.gov.au

Website: www.environment.sa.gov.au

Department of Planning, Transport and Infrastructure

Contact the Department of Planning, Transport and Infrastructure for information on submitting an application for approval of development outside of Council areas.

Phone: 1300 872 677

Website: www.dpti.sa.gov.au

Development Assessment Commission

Contact the Development Assessment Commission for information on how to lodge a development application, and advice on fees, timeframes, documentation requirements and what constitutes 'development'.

Phone: (08) 8303 0771

Email: dacadmin@sa.gov.au

Website: www.dac.sa.gov.au

Other Useful Texts

Aird, G. & Klaassen, N. (1984) Beltana: The Town That Will Not Die

Aird, G. (1984) Beltana Trails; A Guide to Walking And Driving Tours Of Beltana

Australian Government (2013) Ruins: A guide to conservation and management, Australian Heritage Council

Brock, P. (1985) Yura and Udnyu: A History of the Adnyamathanha of the North Flinders Ranges, Wakefield Press, Netley.

Davies, Twidale & Tyler, (eds) (1996) Natural History of the Flinders Ranges, Royal Society of SA.

Donovan & Associates and Austral Archaeology (1995) Flinders Ranges Heritage Survey, Vol 1 'Survey Overview', and Volume 6 'Towns' South Australian DENR.

Flatt, M. (1981) Beltana: A Survey of Significant Structures and Guidelines, NER Rpt, Planning SA.

Hull, I.K. (1973) The Rise and Fall of Beltana: a settlement study.

Marquis-Kyle, P. (2004) The Illustrated Burra Charter, Australia ICOMOS with the AHC, Sydney.

Mincham, H. (1983) The Story of the Flinders Ranges, Rigby, Adelaide.

Payne, E.L. (1974) Beltana- Six Miles, Rigby, Adelaide.

6. Glossary of Conservation Terms

The following terms used in this guideline are taken from *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (1999).

Adaptation means modifying a place to suit the existing use or a proposed use.

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Maintenance means the continuous protective care of the fabric and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Setting means the area around a place, which may include the visual catchment.

Use means the functions of a place, as well as the activities and practices that may occur at the place.



For further information please contact:

Department for Environment and Water phone information line (08) 8204 1910, or see SA White Pages for your local Department for Environment and Water Natural Resource office.

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