

Chapter 1: Part C

Residential Development

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Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

C1. INTRODUCTION

What is the purpose of this Part?

Byron Shire is one of the most desirable residential and tourist locations in New South Wales, as much for its unique natural environment as for its lifestyle and climate attractions. The form of the built environment and its relationship to the natural environment will be a crucial factor in determining the future development of the Shire.

Byron Shire Council has recognised the need to plan for residential and tourism development. Such development will need to be in harmony with its surroundings, both natural and constructed, and enhance the physical context valued by the community and by the Shire's increasing number of visitors.

Council also recognises that there is a growing diversity in residential and tourist needs, reflecting changing household types and incomes, lifestyles and recreational pursuits. It is aware of the need to promote a higher quality of design within a more cost-efficient development framework.

This part of the Development Control Plan has been adopted by Council to incorporate controls complementing Byron Local Environmental Plan 1988. The aim has been to develop controls that provide sufficient flexibility to promote the development of innovative and imaginative building forms. Building forms need to be related to each other and to their surroundings by careful attention to orientation, forms, materials and landscaping..

This policy must be read in conjunction with other chapters of this development control plan that apply to specific areas of townships and rural parts of the Shire (see Chapter 1 Part A7).

What development does this Part apply to?

This Part of the DCP applies to all development relating to the erection of, or additions or alterations to, or use of residential development within the Shire of Byron, including:

- Dwelling houses;
- Expanded houses^(D);
- Residential flat buildings;
- Group dwelling^(D) developments, including home units, villa homes, town houses, terraces, cluster housing and the like;
- Dual occupancies^(D) (attached or detached);
- Hotels, motels, hostels^(D) and boarding-houses^(D);
- Rural tourist facilities^(D) containing accommodation;
- Tourist facilities;
- Bed and breakfast establishments^(D);
- Holiday cabins^(D);
- Caravan parks^(D) and camping grounds; and
- any other form of residential accommodation, whether for long or short-term occupation.

What are the Objectives of this Part?

- The Objectives of this Part of the DCP are:
- To promote residential development, including tourist accommodation, which is of a high design standard and which is sensitive to and enhances the physical environment and the social fabric particular to Byron Shire.

- To ensure that tourist development, located in residential areas, does not adversely impact on the amenity of residents.
- To accommodate a variety of residential forms to reflect the growing diversity of household types and incomes, lifestyles and tourist needs.
- To optimise the provision of infrastructure services in the most efficient, effective and sustainable manner including where appropriate the employment of energy and on-site water supply and waste water disposal systems.
- To ensure equity of access for people with access disabilities, particularly to medium density and non-private residential accommodation.
- To optimise the retention of views to and from water bodies, foreshore reserves, public areas, streets and residential allotments^(D).
- To limit potential for additional traffic on the road system and to reduce car dependence through facilitation of public transport, cycling and walking. New objective.

C2. GENERAL PROVISIONS

The provisions of this Part of the DCP relate to the siting and orientation of residential buildings; the allowable density and bulk; the manner in which buildings relate to the climate, environment and streetscape; provisions for landscaping, vehicular movement and parking on-site; and other relevant matters. This Part also provides design guidelines relating to the following important design considerations:

- House temperature
- Natural light and shade
- Energy consumption
- Landscape
- Bushfire risk

These factors are the realities of our environment and day-to-day life which must form the basis of house and site^(D) design.

C.2.1 Additional Design Guidelines and Information

Additional information about design and siting of residential development can be obtained from the following organisations and publications:

- NSW Department of Environment, Climate Change and Water.
- Department of Planning - North Coast Design Guidelines.
- Total Environment Centre
Level 4
78 Liverpool Street
Sydney 2000
(02)92613437
- PlanningNSW,
Guidelines for Siting Rural Dwellings in Coastal Areas,
Technical Bulletin No.11 (1978).
- Drysdale J.W., Designing Houses for Australian Climates,
Experimental Building Station Bulletin No.6 (1975).

Attention is drawn also to other Parts of this plan which contain Council's adopted DCP's and which will be taken into consideration regarding any residential development application. These are listed in Chapter 1 Part A7.

This section applies to the erection of, or additions or alterations to all forms of residential development in the Shire of Byron.

C2.2 Element – Height of Buildings

Refer to Clause 40 of Byron Local Environmental Plan 1988.

C2.3 Element – Buffer Areas

Element Objectives

- *To recognise that certain types of legitimate, established developments create off-site environmental impacts;*
- *To protect authorised established development from intrusion by residential development;*
- *To minimise land use conflicts between such developments and residential development; and*

- To ensure that the amenity of new residential development is not adversely affected by impacts from such developments.

Performance Criteria

Developments must be located so that they will not be adversely affected by, and so that there will not be landuse conflicts arising from, environmental impacts generated by developments referred to in the Prescriptive Measures.

Prescriptive Measures

To minimise land use conflicts and avoid undue interference with the living amenity of residents, residential development must be located so as to ensure the following minimum buffer areas around intensive agriculture establishments, quarries, sewage treatment plants and the like:

Landuse	Buffer
Large piggeries	2km
Other piggeries	1km
Feedlots	1km
Quarries	1km
Intensive horticulture ^(D)	500 metres
Sewage treatment	400 metres
Garbage tips	500 metres
Dairies	300 metres
Chicken farms	300 metres
Cattle dips	200 metres

Applicants for development on lands within buffer zones indicated above must demonstrate to Council's satisfaction that there is a clear case for variation of this standard. The applicant must demonstrate that the element objectives and performance criteria will be met.

The following matters must be addressed by applicants. This may involve an independent assessment of the issues by a person nominated by Council at the cost of the applicant for development.

1. Consultation with Council in respect of individual cases to determine specific matters to be addressed.
2. Operational characteristics of the land use.
3. Advice from the relevant statutory authorities.
4. Details of surveys undertaken must be provided.
5. Prevailing wind conditions and velocity of winds.
6. Topography and height^(D) of the development.
7. Slope, odour, dust and noise.
8. Economic impact to demonstrate that the long term viability of the use to be buffered is not compromised.

Where applications are received for development that requires buffering, the buffer zone must be provided as far as possible within the subject property and the applicant must address the abovementioned heads of consideration to Council's satisfaction.

C2.4 Element – Coastal Erosion Zones

Element Objective

To provide particular controls and guidelines for development in areas which are predicted to be affected by coastal processes within certain specified time frames.

Performance Criteria

With regard to residential development in coastal erosion zones, refer to Chapter 1Part J of this development control plan.

Prescriptive Measures

With regard to residential development in coastal erosion zones, refer to Chapter 1Part J of this development control plan.

C2.5 Element – Building Height Plane**Element Objectives**

1. *To ensure that a residential development will not significantly:*
 - (a) *increase the overshadowing of adjoining properties;*
 - (b) *reduce the level of privacy enjoyed by adjoining properties; or*
 - (c) *obstruct views from adjacent existing buildings; and*
2. *To ensure that the occupants of the building or buildings will enjoy the optimum use of winter sunlight and summer shade.*

Performance Criteria

Developments must be set back progressively from the site^(D) boundaries as height^(D) increases so that they do not adversely affect existing or future development on adjoining properties by way of overshadowing, impinging on privacy, or obstructing views.

Developments must be designed so that they will promote energy efficiency and so that residents may enjoy optimum use of winter sunlight and summer shade.

That the window of living areas (decks, living rooms, bedrooms, kitchens, etc.) of development on adjoining properties must, as a minimum, retain full solar access between the hours of 9.00am to 3.00pm on any day.

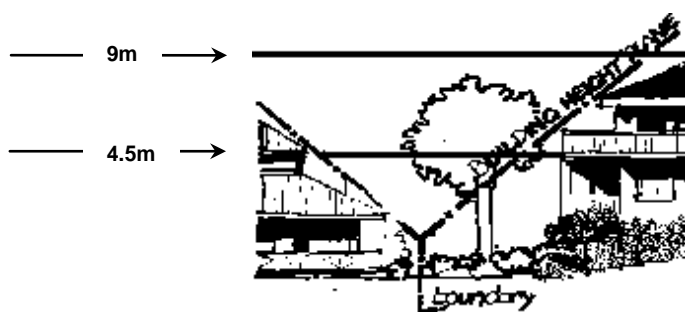
Prescriptive Measures

The building height plane^(D), in combination with building height^(D) limits prescribed above, forms the maximum building envelope for all residential development.

In this clause, a reference to a building or development includes any point on the external walls or roof of the building, but may exclude climate control elements which are of an open character and form part of the landscape treatment of the building. Pergolas, verandahs and lattice walls are examples of such elements.

the vertical distance between the topmost part of the building and the existing ground level below must not exceed **9 metres**.

the floor of the topmost floor level of the building must not exceed **4.5 metres** above the existing ground level

**C2.6 Element – Setback from Street, Side and Rear Boundaries****Element Objective**

To achieve varied and interesting streetscapes, good orientation of residential developments with regard to sun, shade, wind and neighbouring development, and effective use of allotments^(D) to create private open space and courtyards.

Performance Criteria

Setback requirements are designed to be flexible to achieve the Element Objective.

The street face of a building, and any open space between it and the street, must contribute to the general attractiveness of the streetscape by means of good design, appropriate materials and effective landscaping. A reasonable degree of integration with the existing pattern of setbacks must be balanced with the need to provide variety in the streetscape.

Private open space and common landscaped areas^(D) of the site^(D) must be useable as part of the living environment available for the occupants of the development. Council will discourage the provision of bare spaces between buildings and the street which are unusable because they lack privacy, or because they are inappropriately planned or treated for climate control.

Strict compliance with minimum setback Prescriptive Measures will not by itself be sufficient to meet the Element objectives.

The setback from a street frontage for a building which is part of a residential development will be determined on its merits, having regard to:

- a) the provisions of any development control plan applying to the specific location;
- b) the position of any existing buildings in the locality;
- c) the size and shape of the allotment^(D);
- d) the effect on vehicular safety and visibility, particularly on corner sites^(D);
- e) the orientation of the allotment^(D) and the proposed dwelling with regard to the sun and prevailing winds;
- f) the proposed location of any private open space, courtyard or landscaped areas^(D);
- g) the facade of the proposed building or buildings which will face the street and the proposed landscape treatment of that part of the allotment^(D) which is visible from the street;
- h) the location and treatment of any car parking areas or car parking structures on the site^(D),

but in any case must comply with the building height plane^(D) and must be no less than the distances shown in Prescriptive Measures below.

C2.7 Element – Extent of earthworks**Element Objective**

- *To minimise environmental impact.*
- *To blend new development into the landscape.*
- *Minimise the disturbance to the natural landform.*
- *Minimise the risk of soil erosion and sedimentation.*
- *Encourage landowners to design dwellings that are in keeping with the natural landform.*

Performance Criteria

Site disturbance by cut and fill of earthworks is to be minimised.

Prescriptive Measures

Excavation of earthworks is to be limited to a depth of 1 metre. Filling is to be limited to a height of 1 metre.

C2.8 Element – Screening the underfloor space of buildings**Element Objective**

To improve the external appearance of elevated buildings.

Performance Criteria

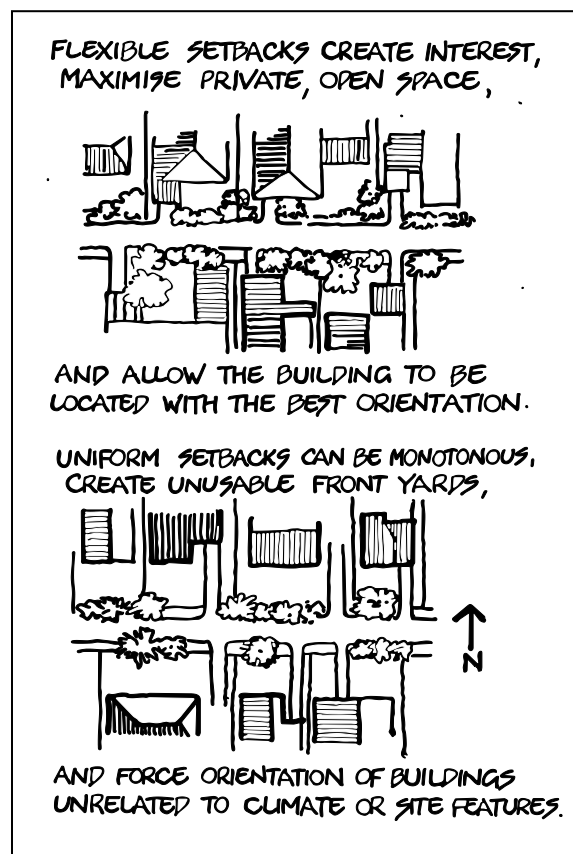
All elevated buildings are to be provided with either dwarf walls or sufficient infill panels and/or advanced landscaping to effectively screen the under floor space to improve the external appearance of buildings.

Prescriptive Measures

Where a building is elevated and the understorey is visible from adjoining properties or a public area, advanced landscaping and/or sufficient screen infill panels must be provided around the base perimeter of the building to improve the external appearance of the building. The screen is to have a vertical coverage of between 40 and 60 % of the surface area below the external wall/s of the upper floor level. The screen is to be constructed of lattice, slats or suitable equivalent materials. The screen is to be located vertically below the external walls and not the outer edge of any verandah or deck. Advanced landscaping (shrubs) is to be planted around the perimeter used in conjunction with screening infill panels where the building is in a visually prominent position with relation to adjoining properties and/or public land.

The screen is to be provided as soon as practicable but certainly prior to occupation of the building.

Where buildings are proposed on land which is bushfire prone the under floor screening may be required to comply with specific requirements prescribed by the Building Code of Australia and Australian Standard AS3959 – *Construction of Buildings in Bushfire-prone Areas*.



Prescriptive Measures

Minimum Street Frontage Setbacks must be:

in rural zones - 55 metres from the boundary of an arterial road and 15 metres from the boundary of other roads.

in urban zones -

- Local Roads - A minimum setback of 6.5 metres must be maintained from the primary front boundary. A variation to 4.5 metres may be sought for single dwelling buildings only with a height^(D) less than 3.6 metres.
- Classified or Arterial Roads - A minimum setback of 10 metres applies to these roads from the primary front boundary. A variation to 6.5 metres may be sought for single dwelling buildings only with a height^(D) less than 3.6 metres.
- Corner allotment^(D) on local or secondary roads - setbacks may be reduced to 3m on one frontage.
- Rear Lane - 3 metres, except for garages, unless it is the primary frontage to the development in which case a setback of 4.5 metres.

No development is permitted within the building setbacks other than garbage storage facilities, mail boxes, landscaping and driveways. Car spaces must not be provided within the setback. Stacked carparking or visitor carparking are not permitted within the setback.

In considering applications for setback variation, council will have regard to:

- a) the visual impact of the variation on the streetscape;
- b) the impact of the variation on the amenity, privacy, views and access of surrounding properties;
- c) the existing and future status of the road; and

- d) compliance with the Building Code of Australia.

Minimum Side and Rear Boundary Setbacks

Setbacks are to be in accordance with the requirements of the Building Code of Australia and the Building Height Plane^(D).

Minimum setbacks for residential flat buildings and group dwellings^(D)

- Side and rear setback – 1.5 metres for single storey^(D)
- Between buildings on a site^(D) – 5 metres.

Setback Provisions – South Ocean Shores

Refer to Byron Shire Development Control Plan 2010 Chapter 14 – South Ocean Shores.

C3. DESIGN PRINCIPLES

Council wishes to ensure the incorporation of design principles appropriate to the local climate and environment into all forms of residential development in the Shire. Such principles relate to siting and orientation, relationship to the surrounding built and natural environment, landscaping, visual impact, building materials, and vehicular movements.

This Section identifies element objectives, performance criteria and prescriptive measures for the various design elements applicable to residential development throughout the Shire. Applicants must refer also to the Department of Urban Affairs and Planning's North Coast Design Guidelines and to other relevant Sections of this Development Control Plan.

C3.1 Element – Visual Impact

Element Objective

To maximise the aesthetic character of the built environment, consistent with the sub-tropical character of Byron Shire.

Performance Criteria

The visual impact of any development is a product of many factors. Some of these factors will be mainly determined by the provisions of various instruments and of this and other Development Control Plans, such as building height^(D) and bulk, vehicle and servicing areas, and landscaping.

However, the actual materials of a building, the nature of its external elements, and their relationship to each other, to adjacent buildings, to the street, and to the environment, can have a significant impact on the visual appearance of both urban and rural areas in the Shire. Therefore, Council has determined some basic principles regarding the appearance of residential buildings, which will be taken into consideration regarding any residential development.

- Site^(D), building and landscaping design must address the climate;
- The street face of a building, and any open space between it and the street, must contribute to the general attractiveness of the streetscape by means of good design, appropriate materials and effective landscaping;
- There must be a reasonable degree of integration with the existing built and natural environment, balanced with the need to provide variety in streetscapes;
- Long straight wall areas will be discouraged and must be broken up visually by a combination of building materials or changes in the wall plane;
- The provision of verandahs, balconies, pergolas and other protected outdoor elements will be encouraged for both visual and energy-efficient reasons;
- Appropriately designed overhanging eaves must be provided to protect against heavy rainfall and summer sun, while allowing winter sun penetration;
- No roof must have a highly reflective surface; any metal roof must have a colorbond or equivalent finish in a colour approved by Council. *White or light coloured roofing will not be approved where likely to be intrusive.*;
- Details of building materials and surface colours must be submitted for assessment with the development application. All building materials must be in character with their surrounding environment

Prescriptive Measures

There are no prescriptive measures for this element.

C3.2 Element – Building Design in Rural Areas

Element Objective

To design for climate control, energy efficiency, reduction of bushfire risks and high quality aesthetic character for residential developments in rural areas.

Performance Criteria

With regard to residential development in rural areas of the Shire, the applicant must meet minimum design standards for climate control, energy efficiency and bushfire hazard. .

Applicants are also referred to Section C15 for considerations regarding climate control and energy consumption and to Part H for considerations regarding landscape. See Part 3.7.4 of the Building Code of Australia. Applicants must ensure that residential development enhances its surroundings visually.

Council will not consent to the erection of a building within a rural zone that presents a stark visual contrast to its surroundings or otherwise detracts from the visual amenity of the area.

Prescriptive Measures

There are no prescriptive measures for this element.

C3.3 Element – Development On or Near Ridgetops

Element Objective

To protect and enhance the natural aesthetic qualities and character of ridgelines in Byron Shire.

Performance Criteria

Developments must not intrude into the skyline when viewed from public land (roads, beaches, reserves etc.).

Clause 31 of Byron Local Environmental Plan 1988 provides that Council must not consent to the carrying out of development on or near ridgelines unless no alternative location for building or development is available, in which case the following objectives to lessen the impact are to be considered:

- a) Whether there will be adequate existing or proposed landscaping, trees or other vegetation which assist or are likely to assist in mitigating visual impact; and
- b) Whether the proposed building design elements, materials of construction and the proposed colours will mitigate potential adverse visual impact, including the reflectivity of materials to be used.

Prescriptive Measures

There are no Prescriptive Measures for this Element.

C3.4 Element – Development in Scenic Zones

Element Objective

To protect and enhance the natural aesthetic qualities and character of scenic escarpment zones.

Performance Criteria

Development on land within Zone No. 7(d) (Scenic Escarpment zone) must be designed to be compatible in appearance with the natural environment and scenic qualities of the land and landscapes in those zones.

Development that detracts from, or is not compatible with, the scenic quality and visual amenity of Byron Shire will not be permitted.

Prescriptive Measures

The Local Environmental Plan makes provision for development within Zone No.7(d) – (Scenic Escarpment Zone). It provides that Council may impose conditions on development in Zone No. 7(d) (Scenic Escarpment Zone), regarding -

- a) the use of dark tones or dark coloured materials of low reflective quality on external surfaces;
- b) the retention of existing vegetation;
- c) landscaping to be carried out on the site^(D); and
- d) the siting of proposed buildings.

C3.5 Element – Minimum Lot Sizes and Street Frontages**Element Objective**

To ensure that the area and frontage of land proposed for particular forms of residential development are suitable to accommodate a range of those development types which will be compatible with the existing and planned character of the environment in which they are located.

Performance Criteria

The site area^(D) and frontage of land proposed for various forms of residential development must be sufficient to accommodate the development, its access, landscaping and required facilities and services in accordance with this DCP and in a manner which ensures the development will be compatible with the existing and planned character of the locality.

Prescriptive Measures

The minimum site area^(D) and minimum street frontage for residential development must be:

Type	Area	Frontage
Dual Occupancy ^(D)	800 m ²	15 metres
Residential Flat Buildings, Medium Density Development and Group Dwellings ^(D) (except in Byron Bay and Suffolk Park, see below)	1200 m ²	25 metres
Residential Flat Buildings, Medium Density Development and Group Dwellings ^(D) (in Byron Bay and Suffolk Park)	N/A	20 metres
Tourist facilities including serviced and holiday apartments	1200 m ²	25 metres
Motel and Hostel ^(D) buildings	1200 m ²	25 metres

Note: For Byron Bay and Suffolk Park refer to the Residential Precinct Map

C3.6 Element –Fences

Element Objective

1. To permit residents to erect fences to provide a sense of territory, privacy, noise reduction and safety.
2. To ensure that fences do not remove the sense of safety in the street that pedestrians gain from the casual observation by residents.
3. To ensure that fences do not unduly reduce opportunities for casual social interaction in the community.
4. To ensure that fences do not become a dominant built element in the streetscape.
5. To exclude unwanted light from vehicles in particular circumstances.

Performance Criteria

Any fences located within 10 metres of the kerb in an adjoining street must not impair driver and pedestrian visibility at the intersection.

The fence must not prevent the residents of the dwelling^(D) from casually observing the adjacent street.

Fences must not detract from the streetscape in terms of materials, scale or colours.

Fences must not be used as a noise reduction measure unless other noise reduction measures (eg double glazing, mounding) are not practical or are cost prohibitive.

Prescriptive Measures

The height of fences must not exceed;

Fence Location	Height
Front Fence	1.2 metres
Side Fence	1.2 metres within the building line setback and 1.8 metres for the remainder.
Rear Fence	1.8 metres. Where the rear fence is the primary frontage, 1.2 metres

Note: A front fence is any fence or like barrier erected forward of the building line setback, whether it is erected on the boundary or not.

Any solid front fence higher than 1.2 metres must not be continuous but must have recessed sections of a minimum 0.5 x 0.5 metres at a maximum interval of 6 metres to allow planting of vegetation to reduce the impact of the fence.

Front fences greater than 1.2 metres and less than 1.8 metres are permitted for properties:

- near commercial premises; and
- where car headlights can be demonstrated to be a potential problem

Fencing Provisions – South Ocean Shores

Refer to Byron Shire Development Control Plan 2010 Chapter 14 – South Ocean Shores

C4. SINGLE DWELLINGS

This section outlines the controls applicable specifically to single dwelling^(D) development. It must be read in conjunction with the general provisions set out in Sections C1 and C2 of this Development Control Plan.

In this section, a reference to a single dwelling^(D) generally relates to a dwelling^(D) house, but also includes a reference to an expanded house^(D) or a dwelling-house^(D) operating, or proposed to be operated, as a bed and breakfast establishment^(D), except where specifically stated otherwise.

C4.1 Element – Density Control

Element Objective

To promote a low density residential character in single dwelling^(D) areas.

Performance Criteria

The bulk, scale and density of dwelling houses^(D) must be consistent with development in the locality.

The site^(D) coverage must allow adequate areas for access, parking, landscaping, useable outdoor recreation and clothes drying.

The area of the site^(D) covered by impervious surfaces must be minimised to reduce stormwater runoff.

Prescriptive Measures

A single dwelling^(D) must have a floor space ratio^(D) no greater than 0.5:1.

Twenty five percent (25%) of the site^(D) must be covered by absorbent surfaces. Such surfaces must be either lawn or landscaping.

Special Provisions – South Ocean Shores

Refer to Byron Shire Development Control Plan 2010 14 – South Ocean Shores

C4.2 Element – On-Site Car Parking

Element Objective

To provide adequate and visually compatible accommodation for vehicles.

Performance Criteria

Car parking must be provided on the site^(D) in a manner which is both convenient and visually satisfactory.

Car parking structures, including garages and carports, which are visible from the street must be integrated with the dwelling^(D) in terms of design and materials, and where possible must form part of the dwelling^(D) structure.

Prescriptive Measures

Refer to Chapter 1Part G - Vehicle Circulation and Parking for detailed provisions regarding car parking and vehicle access.

Council may consent to the location of a carport such that it does not comply with the building height plane^(D) in relation to a boundary, having regard to the matters contained in Section C2.5 and to the adequacy and safety of vehicular access.

C4.3 Element – Landscaping

Element Objective

- *To enhance the visual quality of residential areas and to improve the residential amenity of the Shire.*
- *To limit stormwater runoff (from residential areas)*

Performance Criteria

To enhance the visual quality and improve the residential amenity of the Shire, Council encourages the landscaping of dwelling-house^(D) allotments^(D) in accordance with the principles contained in Chapter 1Part H - Landscape.

Prescriptive Measures

In cases where a dwelling^(D) is to be erected closer than 6.5 metres to the front boundary, Council will require, as a condition of approval, adequate landscaping to be provided to the street frontage of the lot prior to occupation of the dwelling^(D).

Twenty five percent (25%) of the site^(D) must be covered by absorbent surfaces. Such surfaces must be either lawn or landscaping.

C4.4 Element – Reduced Side or Rear Setbacks

Element Objective

To provide flexibility in siting and design of development in urban residential areas.

Performance Criteria

Development may be permitted to encroach into the side setback and building height plane^(D) area where it enhances the design of buildings, complements the streetscape and does not adversely affect privacy, solar access, microclimate or amenity of adjoining development.

Prescriptive Measures

In urban residential areas, Council may consent to the construction of one or more building walls set back less than 900mm from a side or rear boundary, such that the building/s cannot comply with the building height plane^(D), where:

1. such wall or walls contain no openings; and
2. it is demonstrated to Council's satisfaction that the development, if carried out, would improve the siting or orientation of the dwelling/s^(D) or the provision of private open space; and would not significantly:
 - a) increase the overshadowing of adjoining properties; or
 - b) reduce the level of privacy enjoyed by adjoining properties.

Applications for zero lot line development will only be considered where the relevant lot or lots are part of an integrated design, and where all buildings set to a zero lot line are constructed prior to issue of a Subdivision Certificate.

C5. DUAL OCCUPANCY

Council recognises the role of dual occupancy development in contributing to infill development, making fuller use of existing services, adding to the stock of rental accommodation and widening the range of housing options. Council wishes to encourage dual occupancy^(D) developments which suit the differing needs of the community and which enhance the residential character of the Shire.

For dual occupancy^(D) the minimum site area^(D) is 800 m² and the minimum street frontage is 15 metres. (See Clause C3.5)

Definitions

Any reference to a dual occupancy^(D) development includes development consisting of 2 dwellings^(D). A dual occupancy^(D) may be subdivided via strata or torrens title.

The local environmental plan provides that dual occupancy^(D) may consist of:

- (a) the conversion of a dwelling-house^(D) into 2 dwellings^(D), by alteration or addition; or
- (b) the erection of a building containing 2 dwellings^(D),

but only if not more than 2 dwellings^(D) will be created or result on the allotment^(D).

In zones 2(a), 2(t), 2(v) or 7(f2), a dual occupancy^(D) may also consist of:

- (c) the erection of a separate dwelling^(D) on an allotment^(D) of land on which a dwelling-house^(D) is already situated;
- (d) the erection of 2 separate dwellings^(D) on an allotment^(D) of land,

but only if not more than 2 dwellings^(D) will be created or result on the allotment^(D)

C5.1 Element – On-Site Car Parking

Element Objective

To provide adequate and visually compatible on-site accommodation of vehicles for residents and visitors.

Performance Criteria

On corner lots, there may be an advantage in providing access to each dwelling^(D) from a different street frontage, paying particular attention to the need to make the best use of the site^(D), to promote traffic safety and to orient buildings and landscaped areas^(D) to maximise climatic advantages.

Prescriptive Measures

The requirements for on-site car parking for dual occupancy^(D) developments are set out in Part G.

C5.2 Element – Character

Element Objective

To ensure that dual occupancy^(D) development is compatible in character with development in the locality, provides adequate private open space and addresses slope and drainage issues.

Performance Criteria

In assessing any proposal for dual occupancy^(D) development, particular consideration will be given to the topography and slope of the site^(D), design to minimise loss of privacy, the visual impact of the proposal and the likely impact on water flows and drainage.

To encourage better visual quality and greater public acceptance, any attached dual occupancy^(D) development must be designed as far as possible to look like a single dwelling^(D). Mirror-image dual occupancies must be avoided.

Private open space must be specifically designed to be easily accessible to each dwelling^(D).

Prescriptive Measures

There are no prescriptive measures for this Element.

C5.3 Element – Density Control

Element Objective

To promote a low density residential character.

Performance Criteria

The bulk, scale and density of dual occupancy^(D) development must be consistent with single dwelling^(D) development in the locality.

The site^(D) coverage must allow adequate areas for access, parking, landscaping, useable outdoor recreation and clothes drying.

The area of the site^(D) covered by impervious surfaces must be minimised to reduce stormwater runoff.

Prescriptive Measures

The local environmental plan provides that a dual occupancy^(D) development will have a floor space ratio^(D) no greater than 0.5:1.

It also provides that, where -

- a) an application is made to alter or add to a dwelling-house^(D) to create 2 attached dwellings^(D); and
- b) the floor space ratio^(D) of the dwelling-house^(D), before alteration or addition, exceeds 0.5:1,

Council may consent to the application if the floor space ratio^(D) of the dwellings^(D) to be created is not greater than the floor space ratio^(D) of the dwelling-house^(D) before alteration or addition.

Twenty five percent (25%) of the site^(D) must be covered by absorbent surfaces. Such surfaces must be either lawn or landscaping.

Where sewerage services are to be provided via an on-site sewage management system the pervious area required to be set aside for the satisfactory operation of that system (including areas for treatment and disposal, and for buffers to them) must not be included in the site area used in the above density calculations but must be an additional site area to that which would be otherwise required.

C5.4 Element – Sound Proofing

Element Objective

To ensure an acceptable acoustic environment for residents.

Performance Criteria

Division walls between separate occupancy areas must be of sound resisting construction to ensure acoustic privacy and amenity between rooms.

Prescriptive Measures

The provisions of Element C7.6 apply.

C5.5 Element – Private Open Space**Element Objective**

To ensure that adequate accessible and useable open space is provided to meet the recreational, gardening and landscape needs of residents.

Performance Criteria

Private open space areas must be of dimensions to suit the projected requirements of the occupants and guests and to accommodate outdoor recreation needs, as well as providing space for service functions such as clothes drying and domestic storage.

Part of the private open space must be capable of enabling an extension of the function of the dwelling^(D) for relaxation, dining, entertainment, recreation and children's play, and be directly accessible from the dwelling^(D). Provision must be made for space for private gardening such as vegetable gardens.

Location of private open space must take account of outlook, natural features of the site^(D) and neighbouring buildings or open space. Orientation of private open space must provide for maximum year round use in terms of sunlight.

Private recreational facilities must not adversely affect the amenity of adjacent properties.

Prescriptive Measures

Each dwelling^(D) must have a minimum landscaped area^(D) of 90m², so located that each dwelling-house^(D) will have access to an area of private open space at natural ground level, not located in the front setback, having a minimum area of 30m² and a minimum length and width each of 4m, excluding any area used for vehicle circulation or parking.

C5.6 Element – Adjoining and Adjacent Development**Element Objective**

To ensure that new development is consistent with the character and amenity of existing development in the locality.

Performance Criteria

Development must be compatible with the scale, height^(D) and character of adjoining and adjacent development.

Prescriptive Measures

Council will only consider Dual Occupancy^(D) development in urban areas where, in its opinion, it has been demonstrated that the following objectives have been met:

- a) adequate provision for reasonable protection of existing views from neighbouring houses;
- b) adequate provision for privacy of the proposed dwelling-house(s)^(D) and any adjacent dwelling-house(s)^(D);
- c) adequate provision for access to natural light and solar access for the proposed dwelling-house(s)^(D) and any adjacent dwelling-house(s)^(D);
- d) maintenance of the character and neighbourhood amenity of the adjoining residential area;

Where an application proposes the construction of a second dwelling^(D) on already developed land and the surrounding development is single storey^(D), Council will require the proposed building to be single storey^(D).

To achieve the above objectives the site^(D) characteristics, including slope and aspect, must be taken into consideration in assessing the appropriate height^(D) and number of storeys^(D).

C5.7 Element - Attached Dual Occupancies

Element Objective

To maintain the rural character and appearance of dual occupancy^(D) development in rural areas.

Performance Criteria

Dual occupancy^(D) development in rural areas must create the appearance of being a single dwelling-house^(D).

Prescriptive Measures

In rural areas, a dual occupancy^(D) must be contained within one building (that is, attached dual occupancy^(D)). The proposed development must have an appearance which gives the impression of a single dwelling-house^(D), unified by similar materials, colours, textures, massing and roof pitches. The dwellings^(D) may be connected by a carport, garage or other substantial structure.

C6. RURAL WORKERS' DWELLINGS

C6.1 Element – Considerations

Element Objective

To facilitate assessment of legitimate proposals for Rural Workers' Dwellings.

Performance Criteria

There are no performance criteria for this element.

Prescriptive Measures

Clause 16 of Byron LEP 1988 contains special provisions relating to Rural Workers' Dwellings.

The following additional matters will be given consideration in regard to applications to erect a rural worker's dwelling in addition to the provisions of the LEP:

- (a) An application to erect a rural worker's dwelling must be accompanied by the following documentary evidence by Statutory Declaration of the owner of the land to demonstrate clearly the need for an additional dwelling^(D) on the land for a rural worker:
 - i. details of existing farm enterprises, labour inputs and farm infrastructure:
 - ii. the quantity and value of produce marketed or likely to be marketed from the property.
- (b) The existing agricultural use which requires the erection of a rural workers dwelling must be of sufficient long-term viability to justify the need to engage labour.
- (c) The applicant must provide evidence that suitable accommodation is not available in the locality for the rural worker.

Council reserves the right to refer any application for a rural worker's dwelling to the Department of Primary Industries for specialist advice concerning the proposal, prior to determination of the application.

C7. MEDIUM DENSITY AND RESIDENTIAL FLAT BUILDINGS

The Council wishes to encourage variation in medium density development^(D) by providing simple, flexible controls which are intended to produce more attractive and innovative residential buildings, more imaginative use of outdoor spaces, more privacy and better access to sunlight and shade.

This section applies to all medium density development^(D), and residential flat buildings and group dwellings^(D) developments. This section must be read in conjunction with the general provisions set out in Chapter 1 Sections C1 and C2 of this Development Control Plan.

In all areas (apart from Byron Bay and Suffolk Park), the minimum site area^(D) is 1200 m² and the minimum street frontage is 25 metres. (See Clause C3.5) In Byron Bay and Suffolk Park there is no minimum site area^(D) for medium density development, residential flat buildings and group dwellings^(D) however the minimum street frontage is 20 metres (see Clause C3.5 and the Residential Precinct Map for Byron Bay and Suffolk Park).

C7.1 Element – Density Control

Element Objective

- To ensure medium density development^(D) does not overtax existing services, infrastructure and facilities; and
- To provide opportunities for a mix of housing development forms.

Performance Criteria

There are no performance criteria for this Element.

Prescriptive Measures

The maximum number of dwellings^(D) which Council will approve in those zones where medium density development^(D) is permissible can be determined by dividing the site area^(D) of the land required per dwelling^(D) into the area of the site^(D) in accordance with the table below. The minimum site area per dwelling^(D) applies for all of zones Nos. 2(a), 2(v) and 7(f2).

Dwelling ^(D) size	Site area ^(D) required per dwelling ^(D)
Small (under 55 m ² in floor plan area ^(D))	200 m ²
Medium (55-85 m ² in floor plan area ^(D))	250 m ²
Large (over 85 m ² in floor plan area ^(D))	300 m ²

However whether this theoretical maximum can be achieved on a specific site^(D) will depend on the site's^(D) shape and topography, and compliance with other requirements of this DCP.

Where sewerage services are to be provided via an on-site sewage management system the pervious area required to be set aside for the satisfactory operation of that system (including areas for treatment and disposal, and for buffers to them) must not be included in the site area used in the above density calculations but must be an additional site area to that which would be otherwise required.

Special Provisions – South Ocean Shores

Refer to Byron Shire Development Control Plan 2010 Chapter 14 – South Ocean Shores for areas identify for medium density development in South Ocean Shores. The above Density Control provisions apply to these areas.

C7.2 Element – Dwelling Densities in Byron Bay and Suffolk Park

Element Objective

- To give effect to the objectives of Zone Nos 2(a), 2(v) and 7(f2).
- To control and encourage higher dwelling^(D) densities in areas close to the Byron Bay town centre, where greater access is available to work, shopping facilities, recreation and transport.
- To encourage lower densities elsewhere to be compatible with the existing character of the neighbourhood.
- To facilitate low cost affordable housing developments by the Department of Housing or its nominated community housing provider on certain sites.
- To acknowledge lower density criteria for sites with significant ecological or heritage characteristics.
- To acknowledge lower density criteria for sites subject to natural hazards including flooding, bushfire and coastal erosion.
- To enable existing lawfully erected development to be replaced by or redeveloped at the equivalent density of development subject to compliance with other provisions of this DCP.

Performance Criteria

1. Ensure residential densities reflect the ability of Council to provide infrastructure services in an efficient, effective and sustainable manner.
2. Maintain neighbourhood character in terms of streetscape and built form in Precincts 2 and 3.
3. Minimise adverse impacts on ecologically significant vegetation in all residential areas.
4. Ensure dwellings are developed at a density, which avoids undesirable impacts including overshadowing, privacy and decrease in views.
5. Ensure dwelling density is low in areas susceptible to natural hazards.

Prescriptive Measures

New dwellings^(D) or redevelopment of existing dwellings^(D) must be at the density prescribed by the relevant precinct as shown on the Residential Precinct Map for Byron Bay and Suffolk Park, other than as follows:

1. All applications for new dwellings^(D) or redevelopment of existing dwellings^(D) where the owner of the land and the applicant is the NSW Department of Housing (or its equivalent) or its nominated community housing provider will be assessed as if they are located in Precinct 1 in relation to density. Council will need to be satisfied that appropriate mechanisms are in place to ensure long term use for affordable or community housing; and
2. Where 3 or more lawfully erected dwellings^(D) existed on a site^(D) as at the 19th December 2003 and the existing density would not comply with the table below then the equivalent of the existing density of dwellings^(D) will be considered subject to compliance with other provisions of this DCP.; and

The maximum number of dwellings^(D) which Council will approve in Zones Nos 2(a), 2(v) and 7(f2) in Byron Bay and Suffolk Park can be determined by dividing the minimum area of the land required per dwelling^(D) into the site area^(D) in accordance with the table below. The precincts referred to in the table below are shown on the Residential Precinct Map for Byron Bay and Suffolk Park.

Precinct	Dwelling ^(D) Size ^(D)	Minimum Site Area ^(D) per Dwelling ^(D)
Precinct 1	Small (under 55 m ² in floor plan area(s)) ^(D) OR	200 m ²
	Medium (55-85 m ² in floor plan area(s)) ^(D) OR	250 m ²
	Large (over 85 m ² in floor plan area(s)) ^(D)	300 m ²

Development Control Plan 2010 – Chapter 1 Part C - Residential Development
Adopted 3 March 2011 Effective 31 March 2011 (#1068488)

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

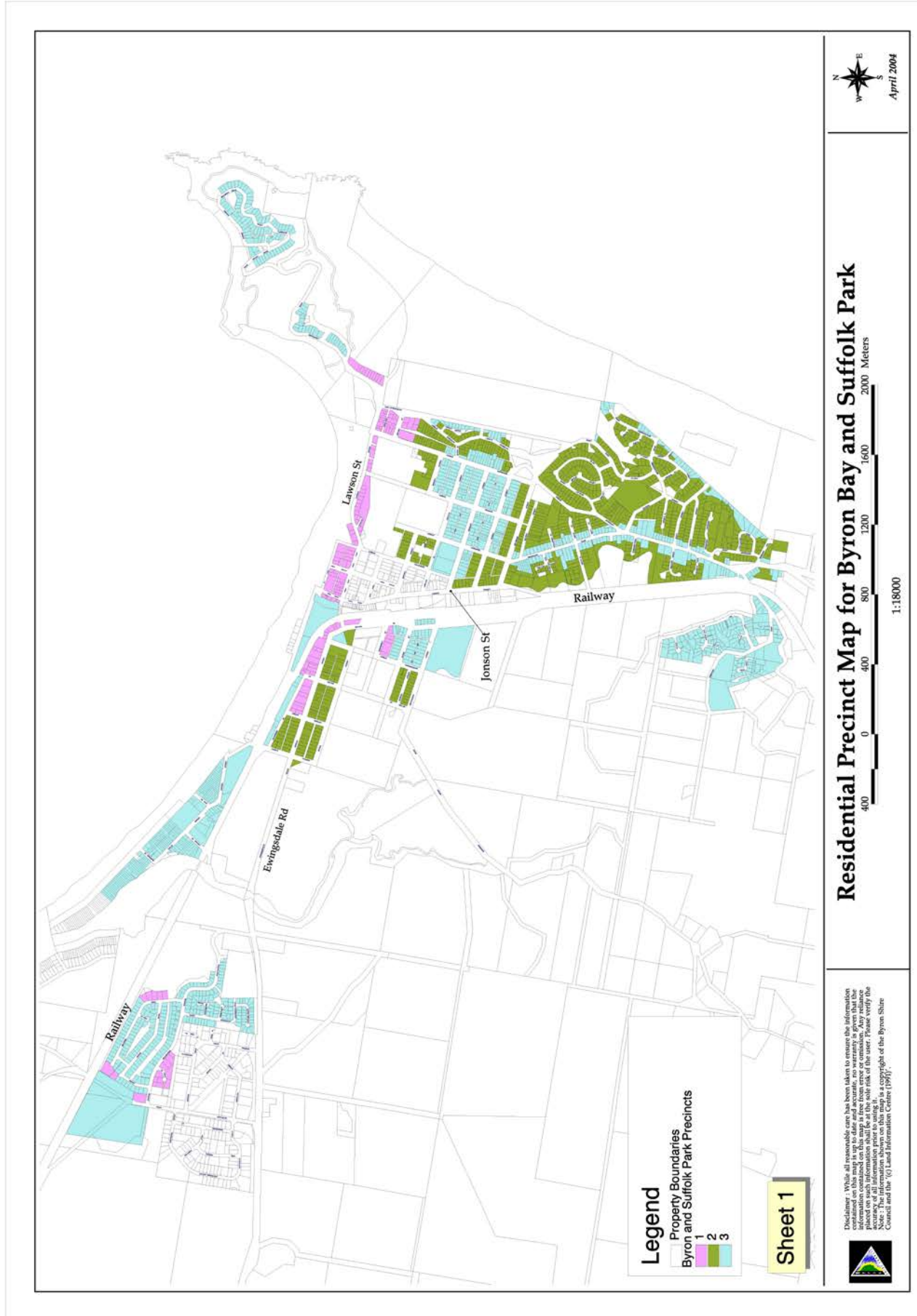
Precinct	Dwelling ^(D) Size ^(D)	Minimum Site Area ^(D) per Dwelling ^(D)
Precinct 2	N/A	400 m ²
Precinct 3	N/A	400 m ² for up to 2 dwellings ^(D) 600 m ² for more than 2 dwellings ^(D)

However whether this theoretical maximum can be achieved on a specific site^(D) will depend on the site's^(D) shape and topography, and compliance with other requirements of this DCP.

Note: Not all land uses are permissible in all zones. Please refer to Byron LEP 1988 land use tables and special provisions.

Where sewerage services are to be provided via an on-site sewage management system the pervious area required to be set aside for the satisfactory operation of that system (including areas for treatment and disposal, and for buffers to them) must not be included in the site area used in the above density calculations but must be an additional site area to that which would be otherwise required.

Residential Precinct Map – Byron Bay



Residential Precinct Map – Suffolk Park



Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

C7.3 Element – Private Open Space Courtyards

Element Objective

To ensure that residents have access to private, useable, landscaped open space.

Performance Criteria

Open space courtyards must be provided, with dimensions to suit the projected requirements of the residents and to accommodate outdoor recreation needs.

Courtyards must be capable of enabling an extension of the living area of the dwelling^(D).

Location of courtyards must take account of outlook and natural features of the site^(D) without impacting on neighbouring buildings or open space.

Orientation and shading of courtyards must provide for maximum year round use in terms of sunlight.

Prescriptive measures

Each dwelling^(D) will have access to an individual courtyard at natural ground level having a minimum area of 30 m² and a minimum length and width each of 4 metres, not including any area used exclusively for the circulation or parking of vehicles. The courtyard must be landscaped to Council's satisfaction.

C7.4 Element – Open Space Balcony

Element Objective

To ensure that residents of above-ground residences have immediate access to outdoor private open space.

Performance Criteria

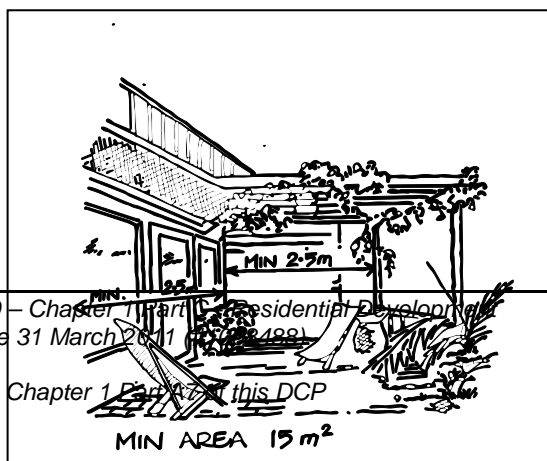
Where dwellings^(D) are situated or have access entirely above the ground level of the development, Council may consent to the provision of private open space by a balcony^(D) which is of sufficient size and which is located so as to provide a suitable private outdoor area to Council's satisfaction.

Prescriptive Measures

This provision is only activated when it is not possible to allocate private space at ground level.

A private open space balcony^(D) must have a minimum area of 15 m² and a minimum length and width of 2.5 metres each. A private open space balcony^(D) must be demonstrated to have appropriate orientation and adequate provision for winter sun and summer shade.

Balconies and/or eaves may overhang minimum length or width dimensions of private courtyards or private open space balconies, subject to compliance with the building height plane^(D), where adequate access to winter sun and summer shade is demonstrated to Council's satisfaction.



Development Control Plan 2010 – Chapter 1 Part 1 Residential Development
Adopted 3 March 2011 Effective 31 March 2011 (2011/199)

Note: ^(D) = definition included in Chapter 1 Part 1 of this DCP

C7.5 Element – Landscaped Area

Element Objective

To provide attractive landscapes that reinforce the function of the street, enhance the amenity of dwellings^(D) and the built environment, and allow preservation of significant vegetation.

Performance Criteria

Landscaped areas^(D) and landscaping must be considered as components of the site^(D) planning process and must reflect the scale of development.

Landscaping must complement existing streetscapes, urban landscape, bushland and be in scale with the height^(D) of buildings. Landscaping must be sensitive to site^(D) attributes such as existing landscape features, streetscape, land capability, micro-climate, views and vistas.

Development must be designed to maximise the number of trees retained on the site^(D).

Prescriptive Measures

The common landscaped area^(D) of the site^(D) must be not less than the total of the areas required for each dwelling^(D) unit, calculated from the following table, less the total of the areas of approved private courtyards and approved private open space balconies in accordance with clauses C7.2 and C7.3.

Dwelling ^(D) size	Landscaped area ^(D)
Small (under 55 m ² in floor plan area ^(D))	50 m ²
Medium (55-85 m ² in floor plan area ^(D))	70 m ²
Large (over 85 m ² in floor plan area ^(D))	90 m ²

A minimum of 75% of the total common landscaped area^(D) of the site^(D) must be of an absorbent finish such as grass, gardens or like material. Areas of landscaping over underground carparks, and the like, can not be included in the area of absorbent finish.

Particular consideration will be given to:

- the retention and provision of appropriate trees on the site^(D)
- the use of earth mounding and terraced areas to create useful and visually pleasing recreation areas and to assist screening
- the orientation of landscape areas with regard to sunlight and prevailing winds
- the provision of sufficient areas adequately shaded against the summer sun and giving adequate access to the winter sun
- any other matters contained in Chapter 1 Part H - Landscape

C7.6 Element – On-Site Parking

Element Objectives

- To provide sufficient convenient parking for residents and visitors;
- To maintain the amenity of adjoining properties and the efficiency of the road network by providing for car parking on-site; and
- to ensure that vehicle access to and from development is safe, effective and enhances visual amenity.

Performance Criteria

Driveway design must provide safe and efficient ingress/egress to the site^(D).

Resident and visitor car parking must be provided according to projected needs.

The design of driveways and parking areas must minimise the visual impact of hard paved areas and incorporate curves.

Prescriptive measures

Refer to Chapter 1 Part G - Vehicle Circulation and Parking for detailed provisions regarding vehicle access, numbers, dimensions and layout of car parking spaces. Large areas of car parking will be broken up by landscaping, mounding or other means to Council's satisfaction.

C7.7 Element – Sound Proofing

Element Objective

To ensure an adequate acoustic environment for residents.

Performance Criteria

Development must be designed to provide a reasonable acoustic environment within dwellings^(D) and minimise the possibility of noise to the occupants of surrounding dwellings^(D).

Sources of noise, where practicable, must be sited away from adjoining properties and where necessary, be screened by acoustical treatments.

Development must be designed to minimise noise and vibration impacts on occupants of surrounding dwellings^(D) or buildings.

Prescriptive measures

Division walls between dwellings^(D) must be of sound resisting construction to Council's satisfaction.

The floors in single storey^(D) residential flat buildings or group dwelling^(D) development consisting of attached dwellings^(D) must be so constructed or treated as to minimise the conduct of sound between dwellings^(D).

C7.8 Element – Clothes Drying Facilities

Element Objective

To ensure adequate, effective space is provided for clothes drying.

Performance Criteria

Outdoor clothes drying facilities must be provided to meet projected needs and located to facilitate privacy and sunlight access.

Prescriptive measures

The minimum provision of clothes drying facilities per dwelling^(D) must be at the rate of 7.5 metres of line per dwelling^(D) in suitably screened external drying areas having a minimum area of 6 m².

C7.9 Element - Garbage

Element Objective

To facilitate the storage and collection of garbage and recyclable products.

Performance Criteria

Garbage and recyclable storage and collections facilities must be provided to meet residents' needs and collections service requirements.

Prescriptive measures

Garbage enclosures must be provided to accommodate a minimum of one 240 litre “wheelie bin” per dwelling^(D).

Garbage enclosures must have a concrete base and be enclosed with approved materials providing adequate side and top screening, protection from scavenging animals, and visual integration with buildings and landscape treatment.

Garbage enclosures are to be located so as to facilitate ease of use (including access to the point of garbage collection) and to minimise nuisance. Adequate lighting is to be provided.

C7.10 Element – Equity of Access and Mobility**Element Objective**

To ensure equity of access and mobility to all members of the community.

Performance Criteria

Developments must be designed to facilitate access and mobility by all members of the community.

Prescriptive measures***Adaptable Housing:***

In developments containing 10 or more dwellings^(D), a minimum of one adaptable dwelling^(D), designed in accordance with AS4299, must be provided for every 10 dwellings^(D) or part thereof.

General Access Requirements:

Access is to be provided in accordance with the Building Code of Australia and AS1428.2. A “continuous accessible path of travel” must be provided.

Appropriate access for all persons through the principal entrance of a building must be provided.

Parking:

For every adaptable dwelling^(D) at least one of the parking spaces required under Chapter 1Part G must be designed in accordance with AS2890 Part 1.

In addition to the above, one visitor parking space designed in accordance with AS2890 Part 1 must also be provided for every 100 parking spaces or part thereof, in developments containing adaptable dwellings^(D).

Refer to Chapter 1Part G of this DCP for further guidance in designing accessible parking.

C7.11 Element – Pipes and Vents**Element Objective**

To minimise visual impacts.

Performance Criteria

External pipes and vents must be concealed.

Prescriptive measures

All service pipes and vents must be concealed within the walls of residential flat buildings and group dwelling^(D) developments. Access must be provided as required by the relevant

authorities. However, provision of recessed service pipes in external walls may be acceptable subject to individual assessment.

C7.12 Element –TV Antennas

Element Objective

To minimise visual impacts and ensure the availability of television reception antennae and dishes.

Performance Criteria

Common Television antennae and/or dishes must be provided to meet the expected needs of residents.

Prescriptive measures

Each residential flat building will be provided with a common television antenna and/or dish system.

C8. TOURISM DEVELOPMENT

For tourism development the minimum site area^(D) is 1200 m² and the minimum street frontage is 25 metres. (See Clause C3.5)

C8.1 Element – Tourism Development in Byron Shire

Element Objective

To enable the development of a diverse tourism industry which complements the natural, social and built environment so as to strengthen the local economic base of the Shire.

Performance Criteria

Council supports low-rise, family-oriented, low-key development in harmony with the natural environment. Council encourages appropriate development for tourism purposes, where permissible, which is in accordance with this criteria

For this reason, particular consideration will be given to the appropriateness of the scale of any proposed tourism development, to ensure that such development enhances its surroundings, both natural and built, and that such development makes a positive contribution to the Shire, in visual, social and environmental terms.

Council has adopted the tourism strategy outlined in the publication 'Keeping Byron Unique' and this is reflected in the Local Environmental Plan, which permits a variety of tourism accommodation forms in rural areas. Council has also adopted the Byron Rural Settlement Strategy 1998 which contains Rural Tourism Best Practice Guidelines and identifies lands suitable for holiday cabin^(D) development.

Prescriptive measures

Where tourism development is proposed in the form of a medium density development^(D), residential flat building or a group dwelling^(D) development, applicants must refer to the general provisions set out in Sections C1 and C2 of this Chapter and to Section C7 - Medium Density, in particular. For other forms of tourism development such as motels^(D), hostels^(D), cabins, caravan parks^(D) and camping grounds, the provisions of Sections C9 and C10 apply.

C9. MOTELS, HOSTELS AND HOLIDAY CABINS

The development of motels^(D), holiday cabins^(D) and hostels^(D) represents an important part of the provision of low-key tourist accommodation within the Shire. Council recognises that there is some flexibility in these forms of tourist development which may result in some similar characteristics. Thus a motel^(D) may consist of a grouping of cabins rather than a single building containing attached motel^(D) units, and this may be a more appropriate building form in many areas of the Shire, particularly in rural areas. Therefore controls are flexibly designed to accommodate various and innovative building forms for this type of tourist development.

This section outlines the controls applicable specifically to motel^(D), hostel^(D) and holiday cabin^(D) development. It must be read in conjunction with the general provisions set out in Chapter 1- Sections C1 and C2 of this Development Control Plan.

For motels^(D), holiday cabins^(D) and hostels^(D) the minimum site area^(D) is 1200 m² and the minimum street frontage is 25 metres. (See Clause C3.5)

C9.1 Element – Density Control

Element Objective

To ensure compatibility with the natural, social and built environmental character of Byron Shire.

Performance Criteria

The density and character of tourism accommodation development must be consistent with the planned character of the locality and with the character and attributes of Byron Shire.

Prescriptive Measures

A motel^(D), holiday cabin^(D) development or hostel^(D) must have a floor space ratio^(D) no greater than 1.2:1.

C9.2 Element – Equity of Access And Mobility

Element Objective

To ensure equity of access and mobility to all members of the community.

Performance Criteria

Developments must be designed to facilitate access and mobility by all members of the community.

Prescriptive Measures

Adaptable Housing

Sanitary Facilities are to be provided in accordance with AS1428.

Sole Occupancy Units and Holiday Cabins

1 unit must be fully accessible per 10 units. A minimum of 1 unit must be so accessible in each development.

Places of shared accommodation, eg backpackers' accommodation, boarding-houses^(D)

A minimum of 1 bed must be provided for people with access disabilities for the accommodation of up to 10 persons. A further bed must be provided for every extra 10 persons, with a minimum of 2 accessible rooms for over 20 persons.

Sanitary facilities must be provided in accordance with AS1428.

General Access Requirements

Access must be provided in accordance with AS1428.2.
(Including access to any laundry, kitchen, sanitary and common facilities).

Parking

One car parking space per 100 car parking spaces must be provided for visitor parking, and designed in accordance with AS 2890 Part 1.

Refer to Chapter 1 Part G of this DCP for further guidance in designing accessible car parking.

C9.3 Element – Character of Motel Units and Cabins**Element Objective**

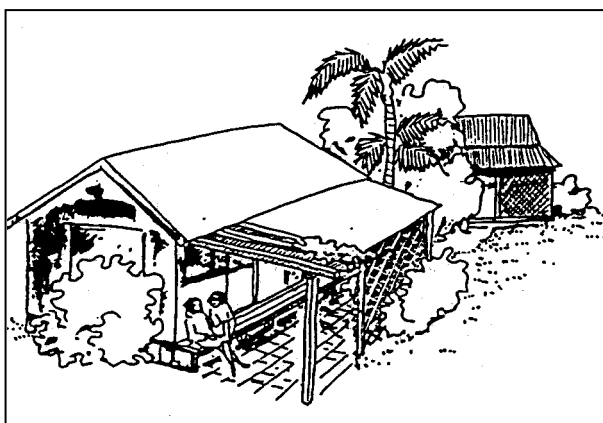
To ensure that all accommodation units contain adequate facilities and provide an adequate living and recreational environment for guests.

Performance Criteria

Motel units^(D) and holiday cabins^(D) must provide self contained eating and living areas and outdoor recreation/ living areas with access to winter sun and summer shade.

Prescriptive Measures

Each motel unit^(D) or holiday cabin^(D) must contain eating and living areas adequate for the proposed number of occupants.



Each motel unit^(D) or holiday cabin^(D) must have access to an outdoor sitting area adequate for the proposed number of occupants, which must be adjacent to the unit's or cabin's living area and which must provide adequate access to winter sun and summer shade. This outdoor area may form part of common access balconies.

C9.4 Element – Character of Hostels^(D)**Element Objective**

To ensure that all accommodation units contain adequate facilities and provide an adequate living and recreational environment for guests.

Performance Criteria

Council requires that hostel^(D) accommodation be of a design quality, and provides a level of amenity to occupants, which is equivalent to that generally available in other forms of tourist accommodation in the Shire.

Prescriptive Measures

Each hostel^(D) bedroom or dormitory must have access to an outdoor sitting area adequate for the proposed number of occupants, which must be adjacent to the bedroom

or dormitory and which must provide adequate access to winter sun and summer shade. This outdoor area may, where Council considers it appropriate, form part of common access balconies.

C9.5 Element – On-Site Car Parking

Element Objective

To ensure provision of safe, accessible on site parking.

Performance Criteria

Refer to Chapter 1 Part G.

Prescriptive Measures

Refer to Chapter 1 Part G.

C9.6 Element – Landscaped Area

Element Objective

To provide attractive landscapes that enhance the amenity of the natural and built environment, and allow preservation of significant vegetation.

Performance Criteria

Landscaping must be considered as a component of the site^(D) planning process, reflect the scale of development and meet the expected outdoor recreation needs of users.

Landscaping must complement existing streetscapes, urban landscape, bushland and be in scale with the height^(D) of buildings.

Landscaping must be sensitive to site^(D) attributes such as existing landscape features, streetscape, land capability, micro-climate, views and vistas.

Development must be designed to maximise the number of trees retained on the site^(D).

Prescriptive Measures

Motels and holiday cabins:

The provisions of clause C7.3 must apply, except that the landscaped area^(D) of the site^(D) available for common use must be not less than the total of the areas required for each motel unit^(D) or holiday cabin^(D), calculated from the following table:

Unit or cabin size	Landscaped area ^(D)
small (under 20 m ²)	20 m ²
medium (20-30 m ²)	25 m ²
large (over 30 m ²)	30 m ²

Hostels:

The provisions of clause C7.3 must apply, except that the landscaped area^(D) of the site^(D) available for common use will be not less than 8 m² for each bed contained in the hostel^(D).

For motels^(D), holiday cabins^(D) and hostels^(D) a minimum of 75% of the total common landscaped area^(D) of the site^(D) must be of an absorbent finish such as grass, gardens or like material. Areas of landscaping over underground car parks, and the like, can not be included in the area of absorbent finish. See changes in Chapter 1 Part H4.4

C9.7 Element – Garbage**Element Objective**

To facilitate the storage and collection of garbage and recyclable products.

Performance Criteria

Garbage and recyclable storage and collections facilities must be provided to meet residents' needs and collections service requirements.

Prescriptive Measures

The provisions of clause C7.7 must apply, except that garbage stands must be provided to accommodate a minimum of one 240 litre "wheelie bin" per:

- each 3 motel units^(D) or holiday cabins^(D);
- each 5 beds of a hostel^(D);

and one 240 litre "wheelie bin" for a manager's residence.

Alternatively, provision may be made for the provision of bulk bins of equivalent capacity.

C9.8 Element – Vehicle Movements**Element Objective**

To facilitate safe, convenient vehicular access to developments.

Performance Criteria

Development design must facilitate vehicle access to office and reception areas.

Prescriptive Measures

Vehicle driveways must be designed to allow for dual transit adjacent to the office or reception area.

C9.9 Element – Pedestrian Movements**Element Objective**

To provide safe, accessible pedestrian access within developments.

Performance Criteria

Pedestrian access within developments must be designed to optimise pedestrian movement and access, facilitate all weather access and cater for people with access disabilities.

Prescriptive Measures

External pedestrian access between motel units^(D), holiday cabins^(D) and hostel^(D) dormitories and other facilities provided as part of the development, including car parking spaces, must consist of appropriate connecting pathways or access balconies with an all-weather surface, and must form part of, and be integrated with, the overall landscape plan for the development.

Where Council considers it advisable, owing to the particular characteristics of the site^(D) or the siting of buildings relative to each other and to other facilities provided as part of the development, any or all connecting pathways must be covered.

Paths of travel throughout the development (accessible units and common facilities) must be continuous and accessible so as to provide access to people with access disabilities.

C9.10 Element – Sound Proofing

Element Objective

To ensure an adequate acoustic environment for guests.

Performance Criteria

Development must be designed to provide a reasonable acoustic environment within accommodation units and to minimise the possibility of noise to the occupants of surrounding units.

Sources of noise, where practicable, must be sited away from adjoining properties and where necessary, must be screened by acoustical treatments.

Development must be designed to minimise noise and vibration impacts on occupants of surrounding dwellings^(D) or buildings.

Prescriptive Measures

Division walls between attached units, cabins or dormitories must be of sound resisting constructed, with minimum sound transmission loss in accordance with the Building Code of Australia.

The floors in single storey^(D) buildings consisting of attached units or dormitories must be so constructed or treated as to minimise the conduct of sound between units or dormitories. The floors of any motel^(D) or hostel^(D) building consisting of attached units or dormitories must be of reinforced concrete above the first floor.

C9.11 Element – Pipes and Vents

Element Objective

To minimise visual impacts.

Performance Criteria

External pipes and vents must be concealed.

Prescriptive Measures

All service pipes and vents must be concealed within the walls of tourist developments. Access must be provided as required by the relevant authorities. However, provision of recessed service pipes in external walls may be acceptable subject to individual assessment.

C9.12 Element –TV Antennas

Element Objective

To minimise visual impacts and ensure the availability of television reception antennae and dishes.

Performance Criteria

Common Television antennae and/or dish must be provided to meet the expected needs of users.

Prescriptive Measures

The provisions of clause C7.11 must apply with respect to common television antenna and/or dish.

C10. CARAVAN PARKS AND CAMPING GROUNDS

Provisions for the development and operation of caravan parks^(D) and camping grounds are contained in the Local Government Act, 1993 and the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005. These provisions relate to licensing, period of residence, land and site^(D) requirements including setbacks, services, parking and roadways, amenities and other facilities, unregistrable movable dwellings^(D) and other matters. Relocatable Homes are regulated by SEPP 36 - Manufactured Home Estates.

The Local Environmental Plan and this Policy also make provisions regarding the siting and development of caravan parks^(D) in urban areas and primitive camping grounds^(D) within the Shire, with these objectives:

- (a) to ensure that the quality of design and amenity available to long-and short-term occupants is consistent with that available to residents and tourists within the Shire generally;
- (b) to ensure that caravan park^(D) and camping ground development is consistent with Council's adopted principles regarding family-oriented, low-key development in harmony with the natural environment.

C10.1 Element – Lot Size

Element Objective

To ensure that adequate area is available for provision of accommodation, access and facilities whilst maintaining the character of surrounding areas.

Performance Criteria

The area of sites for primitive camping grounds^(D) must be adequate to accommodate the development whilst ensuring minimal disturbance to and compatibility with the surrounding natural environment.

Prescriptive Measures

The minimum allotment^(D) size for a primitive camping ground^(D) must be 5 hectares.

C10.2 Element – Recreation Areas

Element Objective

To ensure the provision of adequate area for open space, recreation and landscaping.

Performance Criteria

Recreation areas must meet relevant statutory requirements and provide for the anticipated recreation needs of the users.

Prescriptive Measures

The following provisions must be achieved:

- (a) 10% of the total area of a caravan park^(D) or camping ground (not being an existing park) must be reserved for recreation and communal activities; and
- (b) the reserved area must not include any site, camp-site, roadway or other area designated for any other purpose, but may be improved by trees or other plants or used, to an approved extent, as the site of a building devoted to recreation or communal activities.

Council may approve a building devoted to recreation or communal activities where:

- (a) the building occupies no more than 10% of the total recreation area;

- (b) it is demonstrated that the proposed activities for which the building is designed are appropriate to the proposed mix of long-term and short-term occupants;
- (c) the building is integrated with the overall landscaping plan for the recreation area.

C10.3 Element – Landscaping

Element Objective

To provide an attractive environment within the development and to protect and enhance the amenity and character of surrounding areas.

Performance Criteria

The area reserved for recreation and communal activities (clause C10.2) must be common landscaped area^(D). Council requires particular attention to be given to landscaping of street frontages and site boundaries, screening of amenities buildings and parking areas, and landscaping to increase the privacy and amenity of occupants. A landscape plan must be prepared for the whole of the proposed site, to address the above specific matters and to enhance climate control and the visual appearance of the development.

Particular consideration will be given to:

- The provision of appropriate trees on the site;
- The retention wherever possible of the existing trees on the site;
- The use of existing topographical features, earth mounding and terrace areas to create useful and visually pleasing recreation areas, and to assist screening where necessary;
- The orientation of recreation areas and landscaped areas^(D) with regard to sunlight and prevailing winds;
- The provision of sufficient areas adequately shaded against the summer sun and allowing adequate penetration of winter sun;
- Any other matters contained in Chapter 1 Part H - Landscape.

Prescriptive Measures

There are no prescriptive measures for this element.

C10.4 Element – Siting

Element Objectives

- *To enable the provision of access to adequate facilities and services for residents and guests;*
- *To minimise environmental impacts and ensure that developments are consistent with the sustainability Aims of Byron LEP 1988; and*
- *To maintain and enhance the visual character of the landscape.*

Performance Criteria

Council will consider carefully the appropriateness of the proposed location of any caravan park^(D) or camping ground, and in this regard applicants are referred to the Department of Environment and Planning Circular No. 108 -"Guidelines for the location of caravan parks^(D) accommodating long-term residents".

The siting principles recommended in the circular are illustrated in the diagram following and include:

- Parks accommodating long-term residents are best located in areas suitable for conventional housing;
- Steep slopes must be avoided because of drainage, slip and bushfire problems and potential damage to the environment;

- Parks must not disturb watercourses and must not be located in low-lying areas with poor drainage or on flood-labile land;
- Existing vegetation must be protected;
- Sites which are difficult to landscape and integrate into the visual environment are unsuitable;
- Site layout and landscaping must break up or conceal the repetitive image of caravans and movable dwellings;
- Climatically or visually exposed sites such as headlands and ridges are unsuitable;
- Location adjacent to incompatible land uses is unacceptable; Sites must not form a barrier to adjacent public lands (eg. foreshore areas);
- Sites with long-term residents must have good access to services.

Prescriptive Measures

There are no prescriptive requirements for this Element.

C10.5 Element – Equity of Access and Mobility

Element Objective

To ensure equity of access and mobility to all members of the community.

Performance Criteria

Developments must be designed to facilitate access and mobility by all members of the community.

Prescriptive Measures

General Access Requirements

Access must be in accordance with AS1428.2 (including access to any laundry, kitchen, sanitary and common facilities, office and public telephone). One (1) on-site caravan (or the like) must be fully accessible per 10 on-site caravans, with a minimum of 1 fully accessible on-site caravans for each development.

Parking

One accessible space must be provided for each accessible on-site caravans in accordance with AS2890 Part 1.

C11. BED AND BREAKFAST ESTABLISHMENTS

C11.1 Element – Development Standards

Element Objective

To provide temporary accommodation in both urban and rural areas for the short-term traveller in a dwelling-house^(D) with “home-style” or “farm-stay” atmosphere.

Performance Criteria

Bed and Breakfast Establishments^(D) must be compatible in scale and character with development in the locality and with the planned character of the area; must offer short term accommodation to guests; must provide services and facilities to meet the needs of resident owner/ operator and guests; and must provide access and facilities for people with access disabilities.

Prescriptive Measures

The Element Objective will be achieved by applications for Bed and Breakfast establishments^(D) addressing the following matters. The development must:

1. contain no more than five (5) bedrooms for guest accommodation; and
2. have a total floor area not exceeding 300m² (excluding separate garages, sheds or the like); and
3. accommodate no more than twelve (12) persons ;and
4. require the owner and/or operator to be a permanent resident; and
5. offer at least breakfast for guests; and
6. provide meals for guests only; and
7. contain no facilities (eg. kitchen, sink and the like) in rooms for the preparation of food by guests; and
8. be consistent with Council’s requirements in relation to kitchen facilities, fire protection, acoustic control, etc; and
9. provide car parking in accordance with Chapter 1Part G of this DCP.
10. in urban areas, submit a Landscape Plan . The objective of this plan is to particularly include suitable screening and planting between the car parking areas and adjoining properties; and
11. in urban areas, have private open space with a minimum landscaped area^(D) of 90m² excluding any area used or vehicle circulation or parking; and
12. in rural areas, the dwelling-house^(D) must be located such that it does not have the capacity to restrict existing nor potential neighbourhood land uses and must not prejudice continuing agricultural activity of close-by and adjoining land.
13. Provide access for persons with access disabilities. In this regard, one room (of a 5 guest room establishment) is to be accessible in accordance with the relevant Australian Standard. Sanitary facilities must be provided for people with disabilities in accordance with AS1428. An exemption from this requirement may be applied for where the proposed development is a change of use of an existing building and would involve:
 - Building a ramp from car parking facilities to the entrance of greater than 14 metres in length
 - A significant change to the character of the building, e.g. heritage
 - Substantial renovation to a sanitary facility where renovation is not otherwise proposed.”

C12. MULTIPLE OCCUPANCY OF RURAL LAND

Element Objectives

- *All Rural Landsharing (Multiple Occupancy^(D)) Communities are designed to promote a sustainable, self-reliant communal living structure while also encouraging the collective repair and enhancement of the natural environment.*
- *To enable people to collectively own a single allotment^(D) of land and use it as their principal place of residence.*
- *To enable the erection of more than one dwelling-houses^(D) on the allotment^(D) and the sharing of facilities and resources to collectively environmentally repair and manage the allotment^(D).*
- *To enable the pooling of resources, particularly where low incomes are involved, to economically develop a wide range of communal rural living opportunities.*
- *To facilitate development in a clustered style which both protects the environment and avoids a demand for the unreasonable or uneconomic provision of services.*
- *To allow a form of closer rural settlement which does not involve subdivision, strata title or any other form of separate land title, and does not involve separate legal rights to parts of the land through other means such as agreements, dealings, company shares, trusts or time-sharing arrangements.*

Performance Criteria:

Rural landsharing developments must be consistent with the aims, principles, guidelines and standards of the Byron Rural Settlement Strategy 1998, and must provide for vehicular access to meet anticipated user needs.

The following performance standards apply (section numbers in the following points refer to Byron Rural Settlement Strategy sections):

- Wastewater Treatment and Management of Effluent (refer section 8.1)
- Environmental Buffers, Repair and Enhancement (refer section 8.2)
- Aesthetic Design/ Scenic Character / Energy efficiency (refer section 8.3)
- Water and Riparian Management (refer section 8.4)
- Bushfire Hazard Mitigation (refer section 8.5)
- Impacts on and Buffers to Agricultural, Horticultural and Extractive Industries (refer section 8.6)

Prescriptive Measures

Byron Council's adopted Rural Settlement Strategy 1998 contains detailed guidelines for the development of rural landsharing (multiple occupancy^(D)) communities. These have been adopted as prescriptive measures for the purpose of this DCP and are:

1. The land comprises a single allotment^(D) having an area of at least 20 hectares in size.
2. The number of dwelling-houses^(D), inclusive of any existing dwelling-houses^(D) on the land will not exceed one (1) dwelling-house^(D) for each three (3) hectares of total allotment^(D) area as long as there is one (1) hectare of developable land per dwelling-house^(D) which is identified through an ecological/physical land capability assessment as being capable and suitable for development as calculated in 6(a) (i) to (xi) below.

3. The minimum number of dwelling-houses^(D) on any single allotment^(D) to be no less than six (6) and the maximum to be no more than fifteen (15), or in the case of land described in Schedule 10, the number of dwelling-houses^(D) indicated in that Schedule.
4. The location of the dwelling-houses^(D), excluding any existing dwelling-house^(D) or dwelling-houses^(D), is in a clustered style. The Council must not grant consent where the proposed development is in a dispersed style. A dispersed style is a style in which the dwelling-houses^(D) are located throughout the developable land resulting in longer than necessary road access arrangements or longer than necessary power supply arrangements or adverse social or environmental impacts.

The clustering of dwelling-houses^(D) is in groups of three (3) or more. Separate clustering must demonstrate that the environmental and social impact or impacts of a number of dwelling-houses^(D) and building clusters is less than a single clustering of dwelling-houses^(D) and buildings. Clustering is defined to be dwelling-houses^(D), tourist cabins, community buildings and any other buildings located within close proximity and easy walking distance to each other.

The distances apart must average 80 metres in a cluster but not exceeding 160 metres between any two dwelling-houses^(D) in a cluster. Further, the distance apart between dwelling-houses^(D) must ensure a high level of social interaction and the development of community as well as relate to physical considerations such as site characteristics, including drainage lines, existing vegetation and accessibility on the land defined as being capable and suitable for development.

5. A Rural Landsharing Management Plan has been prepared to Council's satisfaction and clearly addresses the following issues :
 - a) the degree of recognition and understanding among the community regarding collective land ownership and use of resources;
 - b) the designated theme for the respective Rural Landsharing (Multiple Occupancy^(D)) Community;
 - c) the aims and objectives of the respective Rural Landsharing (Multiple Occupancy^(D)) Community;
 - d) any intentions of the respective Rural Landsharing (Multiple Occupancy^(D)) Community in terms of social cohesion, development of community, cooperation and sharing, development of rural living opportunities, the construction of buildings, the use of land, and any economic or business development or other activities which are intended to take place on the land;
 - e) how ownership 'shares' or an individuals entitlements are to be allocated;
 - f) how shareholders or owners in the Rural Landsharing (Multiple Occupancy^(D)) Community are to reach decisions on matters affecting the Rural Landsharing (Multiple Occupancy^(D)) Community;
 - g) how shareholders or owners can dispose of their interest in the Rural Landsharing (Multiple Occupancy^(D)) Community;
 - h) provisions mediation and dispute resolution provisions;
 - i) the type of behaviour which is permissible on the Rural Landsharing (Multiple Occupancy^(D)) Community in terms of what is acceptable regarding:-

- i) use of the land for housing, commercial agriculture, domestic food production and other purposes,
 - ii) visitors and tourists,
 - iii) noise,
 - iv) use of chemicals,
 - v) keeping of cats, dogs and other animals,
 - vi) lifestyle,
 - vii) Landcare,
 - viii) disposal of sewage,
 - ix) disposal of domestic waste and recycling,
 - x) environmental repair, and
 - xi) any other appropriate matters.
- j) the means proposed for establishing land ownership, dwelling-house^(D) occupancy rights, environmental and community management and the internal enforcement provisions of the Rural Landsharing Management Plan are deemed by the Council to be adequate and workable.
6. An Environmental Impact Assessment Report has been prepared to Council's satisfaction addressing the following matters:
- a) A full description of the development and the existing environment likely to be affected, including a concept plan and land capability and suitability report which identifies land capability and suitability in terms of:
 - i) lands subject to bushfire hazards, flooding, slopes greater than 20 percent,
 - ii) areas of visual significance as seen from outside the subject lands,
 - iii) land slip areas and soil erosion areas,
 - iv) existing and potential extractive resources and buffers,
 - v) prime agricultural lands,
 - vi) vegetation: its plant communities, condition and buffers,
 - vii) flora and fauna habitats,
 - viii) areas for environmental repair and buffer plantings,
 - ix) water sources and quality including watercourses, natural drainage, permanent creeks, streams, wetlands and buffers,
 - x) any nearby land uses, including existing and potential intensive agriculture and horticulture, which may produce a conflict with the proposed use of the subject lands particularly in regard to the location of proposed dwelling-houses^(D) and community buildings and prevailing winds and buffers,
 - xi) identification of previous use and any contaminated soils or filled areas,
 - xii) directions, distances and standard of roads to local shops, halls, schools, parks and community facilities,
 - xiii) school bus services and capacity to meet any likely increase in demand,
 - xiv) internal access roads both existing and proposed,
 - xv) indicative footprints of all proposed and existing dwelling-houses^(D) and other building sites including any holiday cabins^(D) (in lieu of dwelling-houses^(D)), community buildings and sheds together with indicative footprints.
 - b) As a result of the above, an assessment is to be made of the constraints to development so as to identify the area of land in hectares which is capable and suitable for the location of dwelling-houses^(D), any holiday cabins^(D) (in lieu of dwelling-houses^(D)), community buildings and other buildings. It is this

assessed area which is then used to calculate the number of dwelling-houses^(D) or holiday cabins^(D) permitted.

7. The future subdivision, including Community Title, Torrens Title or Strata Title or any other form of separate land title and separate legal rights to parts of the land through other means such as agreements, dealings, company shares, trusts or time sharing arrangements is expressly prohibited.
8. No building within 55 m of an arterial road in accordance with clause 27 of the Byron LEP 1988.
9. Development must not be on or near any ridgeline in accordance with clause 31 of the Byron LEP 1988.
10. Any provision of rural tourist facilities^(D) in relation to cabins is to be according to the following table.

No. of dwelling-houses^(D) permitted according to guidelines:	No. of cabins with each cabin being in lieu of a dwelling-house^(D)
6 to 8	3
9 to 11	4
12 to 13	5
14 to 15	6

11. For the Main Arm Area, prior adequate arrangements must be made to Council's satisfaction for the provision of transport services to schools to meet the estimated additional demand as a result of the development.
12. All internal access roads:
 - a) must have a minimum width of 3.5 metres;
 - b) must be at least gravel paved;
 - c) must not exceed a grade of 20% unless constructed in bitumen or concrete. Concrete strips are preferred;
 - d) must be constructed and drained to provide all weather access;
 - e) to the satisfaction of Council.
13. Access to the site^(D) must be via an existing minor road or country road within a road reserve. A pipe culvert or concrete dish crossing vehicular access from the public road to the property boundary must be constructed to Council's satisfaction.

C13. MIXED RESIDENTIAL/ COMMERCIAL DEVELOPMENT

Mixed Residential/ Commercial development is dealt with in Chapter 1 Part D of this DCP.

C14. STUDIOS**Element Objective**

To allow construction of a detached building ancillary to a dwelling^(D) so as to provide a workspace for activities not generally possible in a dwelling^(D).

Performance Criteria

The proponent must demonstrate that the studio is required to carry out a particular activity that cannot be carried out by its nature within the residential house.

The studio must be located close to the associated dwelling house and must be reliant on the utilisation of the existing services, infrastructure and facilities of that dwelling-house.

Prescriptive Measures

Studios are limited to one per property or, in the case of multiple occupancy^(D), one per dwelling^(D).

A studio must:

- a) not exceed 60m² gross floor area^(D).
- b) not contain internal partitions other than those necessary for ablution facilities or demonstrably required for the use of the studio (e.g. photography darkroom).
- c) not contain a kitchen nor be capable of separate habitation.
- d) not be used for separate habitation.
- e) be located not greater than 100m from outside wall of the main part of the dwelling house
- f) not require construction of any additional vehicular access roads, electricity services, separate on-site sewage management systems or clearing of vegetation.

C15. ENERGY EFFICIENT HOUSING

C15.1 Introduction

What development does this Section apply to?

This Section of the DCP applies to all development applications for residential development in Byron Shire, including:

- Dwellings^(D), Dwelling-Houses^(D) and Expanded Houses^(D);
- Bed and Breakfast Establishments^(D);
- Dual occupancies;
- Residential flat buildings and Group Dwelling^(D) Developments, including those used for tourist accommodation;
- Holiday Cabins^(D);
- Alterations and additions to the above development (which involve a floor area greater than 50% of the existing internal floor area – excluding garages).

What does 'Energy Smart' mean?

Energy efficient homes are homes that, through their design and construction, maximise the use of renewable energy sources (such as sunshine), and use less energy. They are 'smart' because they simultaneously help preserve scarce resources, reduce the level of greenhouse gas emissions, and provide significant savings for home occupiers.

This is supported by a study conducted by the Australian Consumers Association (July 1997) which estimated that an energy efficient home is almost \$1,000 a year cheaper to run than an average new home.

An energy smart dwelling^(D) incorporates passive solar design principles to minimise household energy needs. These principles apply to services such as lighting, hot water, heating in winter and cooling in summer. Passive solar design principles minimise energy use by combining and balancing the effects of building design, orientation, shading, insulation, thermal mass, ventilation and landscaping to create comfortable internal living spaces. Where the optimum use of passive solar design principles cannot be achieved due to existing physical conditions, this DCP seeks to ensure that energy efficiency is maintained where possible.

Why include Energy Smart Homes in this DCP?

This Section of the DCP has been developed in response to the growing community desire to achieve greater efficiency in domestic energy use. It stems from a general concern about greenhouse gases generated by energy use, their effect on the environment and, in particular, their contribution to global warming.

The DCP shows how energy efficiency can be achieved in all new residential buildings, including alterations^(D) and additions to existing dwellings^(D). It includes design alternatives - such as passive solar design and solar water heating - that will dramatically reduce the demand for non-renewable energy, thus reducing both costs and air pollution, and increasing the level of comfort in the average Australian home.

What are the Aims and Objectives of this Section of the DCP?

This Section of the DCP aims to provide detailed provisions to ensure that energy efficient residential development occurs within Byron Shire. It further aims to promote and create homes which:

- Use less non-renewable energy;
- Use energy more efficiently;
- Are more comfortable to live in;
- Contribute positively to an overall reduction in greenhouse gas emissions;
- Minimize environmental pollution;

- Cost less to run; and
- Are affordable to purchase.

The objectives of this section of the DCP are to:

- Optimise solar access to residential buildings;
- Improve the quality and energy efficiency of residential buildings; and
- Assist professionals, technicians and trades persons by providing relevant information, and resources in relation to energy efficient design.

How does this Section of the DCP work?

There are four separate components to this Section of the DCP:

- **Section C15.1** provides some general background information and outlines some formal administrative matters.
- **Section C15.2** provides general information regarding what is required to comply with this development control plan. It also outlines the information that needs to be submitted with any development application which is subject to the requirements of Part C15 - Energy Efficient Housing of this DCP. A summary of this information is also provided in Attachment 1 entitled "Attachment for Energy Efficiency Compliance & Exemption."
- **Sections C15.3 to C15.12** provide detailed information on the principles of energy efficiency efficient housing. They include in non-prescriptive information on how to design and construct an energy efficient dwelling^(D).
- **Attachments 1 to 5 inclusive** comprise a number of forms and attachments involved in the implementation of this DCP. They include copies of various check sheets and guidelines which will be of assistance when using this document. These attachments are operational documents that may be changed periodically by Council.

What do terms used in this Section mean?

Ecologically Sustainable Development (ESD) - A commonly accepted definition of ESD in Australia is development which 'uses, conserves and enhances the community's resources so that ecological processes on which life depends are maintained and the total quality of life, now and in the future, can be increased' (ref. *National Strategy for Ecologically Sustainable Development*).

NatHERS - The Nationwide House Energy Rating Software (NatHERS) is a computer simulation tool for rating the thermal performance of houses across Australia. The Energy Management Task Force is responsible for delivering a NatHERS compliance protocol. Any software or paper checklist which passes under this protocol is deemed "NatHERS or equivalent".

North Point - in any discussion relating to orientation of a dwelling^(D) or part thereof, a reference to 'north' is a reference to true solar north and not magnetic, or compass north. True solar north varies from magnetic north depending upon the location. In Byron Shire, true solar north is approximately 12 degrees west of r magnetic north.

Passive Solar Energy Systems - means systems which combine the sun's energy with local climate characteristics, to achieve thermal comfort inside buildings without the use of mechanical devices. In a passive system, the building itself is a solar collector, as well as a heat storage and transfer medium.

Solar Collectors - means any building element or appliance specifically designed to capture or collect the sun's rays for the benefit of the occupants eg. windows including clerestory (or highlight) windows, solar hot water collector panels or photovoltaic (solar-electricity) cells/panels.

C15.2 Compliance Requirements

What are the Compliance Requirements?

All new residential development must achieve a **minimum energy rating of 3.5 stars** using an accepted energy rating technique for the proposed developments' **building envelope** and a minimum Greenhouse Gas Rating for the **hot water system of 3.5 stars** OR seek an **exemption** from this requirement

This section of the DCP also requires that applications for alterations and additions to residential buildings **affecting more than 50%** of the existing internal floor space (not including the garage floor space) also need to achieve a minimum energy rating of 3.5 stars using an accepted energy rating technique for the proposed developments' building envelope OR seek an exemption from this provision. **Alterations and additions do not need to meet the requirements for hot water systems.**

Alterations and additions involving **less than 50%** of the existing internal floor space (not including the garage floor space) do not need to meet the requirements for either the proposed developments' building envelope or hot water system.

What are the Approved Energy Rating Techniques for Building Envelopes?

There are three energy-rating techniques that are approved as part of this DCP. These are as follows:

1. **Deemed to Comply Certificate**. This Certificate is the simplest method of demonstrating that a dwelling^(D) embraces the basic principles of the Energy Smart Home. By complying with ALL sections of the Certificate, Byron Shire Council deems that the intent of its Energy Efficient Housing DCP has been complied with. A copy of the Deemed to Comply Certificate can be found at attachment 2 to this section of the DCP. NOTE: ALL Sections of the Certificate MUST BE complied with.
2. **Byron Shire Council Energy Rating Scorecard**. This Scorecard itemises each component of the building and provides a point score. The Scorecard is not an exact energy rating technique, however it provides confidence that the home will satisfy the Council's Energy Efficient Housing DCP. A copy of the Energy Rating Scorecard can be found at attachment 3 to this DCP. NOTE: A charge for Scorecard checking may apply.
3. **NatHERS Certificate or other Approved Software**. A range of computer software tools has been developed in Australia to simulate and rank building thermal performance across a wide variety of climatic zones and building types and configurations. NatHERS (or its equivalents — refer to Definitions) is a sophisticated thermal modeling tool designed for use by experienced professionals and industry personnel.

It is not expected nor intended that all applicants will use the NatHERS simulation program. NatHERS certification is only required to be supplied by the applicant under this DCP in the following circumstances:

1. If the application is for multi-dwelling housing. (ie. Three or greater unit/residential flat developments);
2. If an applicant's submitted Energy Smart Scorecard Rating is challenged by Council officers and the applicant disagrees with Council's assessment; or

3. If Council requires it (eg. if the proposed design is particularly complex).

NatHERS certification can be determined by third party Accredited Assessors within the building industry or other appropriately qualified assessors as determined by Council.

What are the Energy Efficiency Ratings for Hot Water Systems?

Table C15.2.1 below, outlines the different energy efficiency ratings for hot water systems;

Type	Star Rating
Solar - Gas Boost	5
Solar - Electric Boost	4
Gas - Instantaneous	4
Gas - Storage	4
Heat Pump – Elect. Storage	4
Electric – Instantaneous	2
Electric – Continuous	1
Electric – Storage	1

Table C15.2.1

In most instances, water heating is the biggest greenhouse gas generator in the home. Table C15.2.1 rates hot water systems in terms of a Greenhouse Gas Rating. A 5 star rating is the most environmentally friendly. Generally, the table shows that gas systems are better than all electric systems, except heat pumps. The most efficient systems are gas-boosted solar heaters.

To increase efficiency, water-heating systems must be positioned close to the major points of use, such as the kitchen. .

What Information do I need to lodge with my Development Application?

Council's development application form sets out the information that needs to be included with all development applications. If your application is for residential development subject to the provision of this part of DCP 2010, you will need to provide the following additional information.

Applications for new residential development

Each application for new residential developments must include information regarding the energy rating for the **building envelope** and a Greenhouse Gas Rating for the **hot water system**. To assist Council in considering your application you will need to lodge the following information with your development application.

1. The Construction Plans for the Development must clearly show the following:
 - North Point (This must be identified as either Magnetic North or True North). .
 - Information regarding the construction materials to be used.
 - Colour of roof and walls (described as light, medium or dark) eg. Light colours: cream or , beige, l. Medium colours: greens, greys, apricot. Dark colours: charcoals, deep greys, deep greens, deep red, dark blues.
 - The type and location (walls, under roof, ceiling, underfloor) of insulation to be used. (including reflective foil).

- Any variations to glazing such as the use of tinted or reflective glass.
 - Floor covering types, if known, and where in the house they will be located. (eg: tiles, carpet, bare timber, etc.).
2. Documentation certifying that the development achieves a minimum energy rating of **3.5 stars** using an accepted energy rating technique for the proposed developments' building envelope.

The following table C15.2.2 outlines the required energy rating techniques available, depending on the type of development proposed.

Development Type	Deemed to Comply Certificate	Scorecard	NatHERS
Single Dwelling ^(D) , Dual Occupancy ^(D) Developments	✓	✓	✓
Residential flat developments containing 3 or more units			✓

Table C15.2.2

3. Documentation certifying that the development achieves a minimum Greenhouse Gas Rating of **3.5 stars** for the proposed developments' **hot water service**. The construction plans for the development must clearly show the location, size and type of the hot water system.

Applications proposing major alterations and additions

If your application proposes alterations and additions to an existing residential building which affect more than 50% of the existing internal floor space (not including the garage floor space), you will need to provide the information outlined in item a and item b, above which relate to the building envelope. You will not, however need to provide information regarding the hot water service as outlined in item c.

Applications proposing minor alterations and additions

If your application proposes alterations and additions to an existing residential building which affect less than 50% of the existing internal floor space (not including the garage floor space) you do not need to meet the requirements of this part of the DCP.

Are There Any Exemptions to this DCP?

There are a number of circumstances where you may apply for an exemption to the requirements of this part of the DCP with respect to both the building envelope and hot water system. These circumstances are documented below.

1. Building Envelope -

There are seven (7) conditions under which an exemption can be claimed from the minimum energy performance requirements for the building envelope of dwelling-houses^(D) and multi-dwelling housing. Where one or more of the conditions apply, approval is subject to merit assessment by Council. Compliance with those elements that can be reasonably complied with will still be required.

Exemption conditions:

- a) Novel construction – where the prescribed assessment techniques do not address or reliably assess the performance of the construction being adopted and there are prima facie grounds for believing the prescribed techniques significantly underestimate the building envelopes performance.

- b) Conflicting Guidelines – existing lease and development conditions, Australian Standards or any Policy or Guidelines that Council determines will have priority over this Plan, eg: heritage requirements, which preclude the attainment of the minimum rating requirements.
- c) Adverse impact on material amenity of adjoining land and buildings.
- d) Non-consistent or invalid results from approved computer software tools.
- e) Block orientation, geometry or topography constraints which significantly restrict the development.
- f) Existing overshadowing of the development site^(D).
- g) Uneconomic evaluation – where it can be shown that the attainment of the 3.5 star rating would require additional expenditure which is not cost effective within a ten (10) year period. Further details regarding this matter, including application forms for exemption, can be found in attachment 4 to this DCP.

2. Hot Water Systems -

If the cost of a non-complying hot water system (ie: electric hot water systems) can be shown to be less costly, over a 7-year period, then Council may exempt the application from the requirements of this part of the DCP. The cost comparison must be performed between the desired form of electric water heating and a complying type of hot water system. Further details regarding this matter, including application forms for exemption, can be found in attachment 5 to this part of the DCP.

C15.3 Building Principles

Orientation and Solar Access

Background Principles

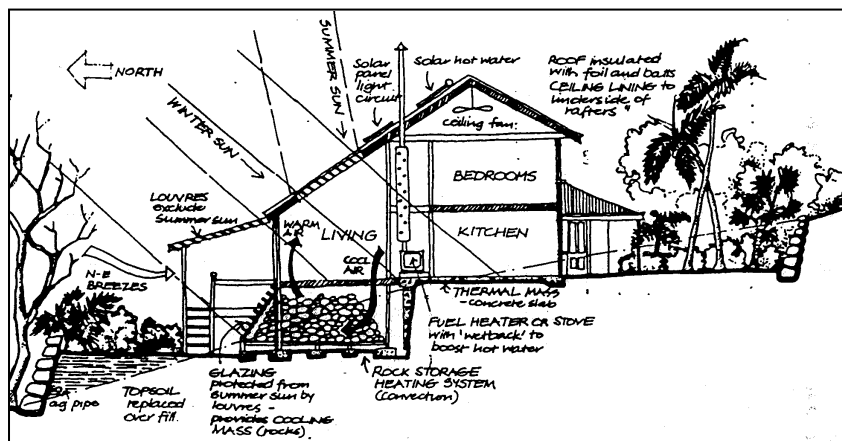
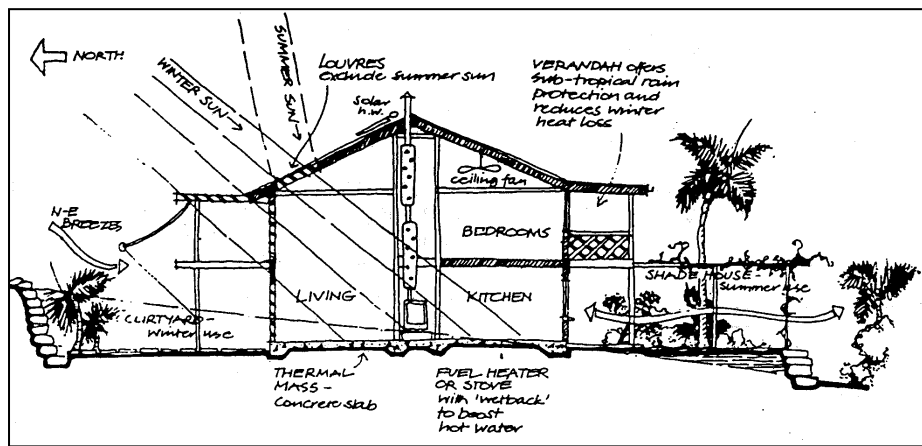
Solar access is the term applied to the ability of a solar collector that is part of or situated on a dwelling^(D) or lot (including open space and clothes drying area) to capture sunlight and take advantage of that energy to a reasonable level.

Design for solar access can begin with the design of a subdivision, but it may also relate to a rooftop solar hot water system panel, or might involve preserving sunlight for the northern windows of a dwelling^(D). If residential lots have been designed to maximise solar access, energy efficiency is much easier to achieve in the design of subsequent residential buildings.

Conflicts can arise in already developed areas, where tall buildings exist or are planned, or where trees block solar access. Situations such as these will require careful consideration.

Solar access is at its lowest level on the mid-winter solstice, 21 June. Shadow diagrams for the winter solstice at 9am, 12 noon and 3pm may be required by Council for certain developments that have the potential to significantly impact on the solar access of an adjoining property. This is particularly relevant for dwellings^(D) comprising two or more storeys^(D).

Passive solar design maximises solar access to north facing solar collectors. For maximum effect, solar collectors should face between 30° east and 20° west of true solar north. The 20° west and 30° east range for 'north-facing' elements represents the limits to energy efficient orientation.



Orientation Objectives

- To preserve solar access to north facing 'solar collectors' (collectors include windows, photovoltaic cells, solar hot water/air panels, clerestory windows etc.) in all residential development.
- To allow for adequate solar access to private open space and clothes drying facilities in all residential development.
- To maximise the thermal performance, thermal comfort, and energy efficiency of all new and significantly altered residential development.

Preferred Outcomes

- Solar collectors should face between 20° west of north and 30° east of north.
- Step building heights^(D), plans and setbacks to permit solar access requirements.
- Full solar access should be maintained to solar hot water or photovoltaic panels. In the absence of existing solar hot water panels, provision should be made for future installations.
- Position solar collectors in areas where no shadows fall. Two hours of direct sunshine is received by 50% of north facing solar collectors designed/installed under this Plan.
- Where existing constraints exist (eg. adjacent buildings or trees), upgrade the building envelope specifications to offset these disadvantages.
- Dwelling^(D) orientation: Design dwelling^(D) specifically for its site^(D).

Dwelling design for solar access

The following principles apply:

- *.Building setbacks:* Distances between buildings are sufficient to allow solar access to major windows in the dwelling^(D).
- *.Open space:* Sunlight should be available to at least 40% of required private open space for at least two hours.
- *.Adjoining development:* Any new development should not reduce the solar access of solar collector/s of an adjoining property to less than two hours per day in mid-winter except solar hot water panels to which full access must be maintained.
- *.Clothes drying:* Sunlight should be available to a clothes-drying area for at least two hours on June 21.

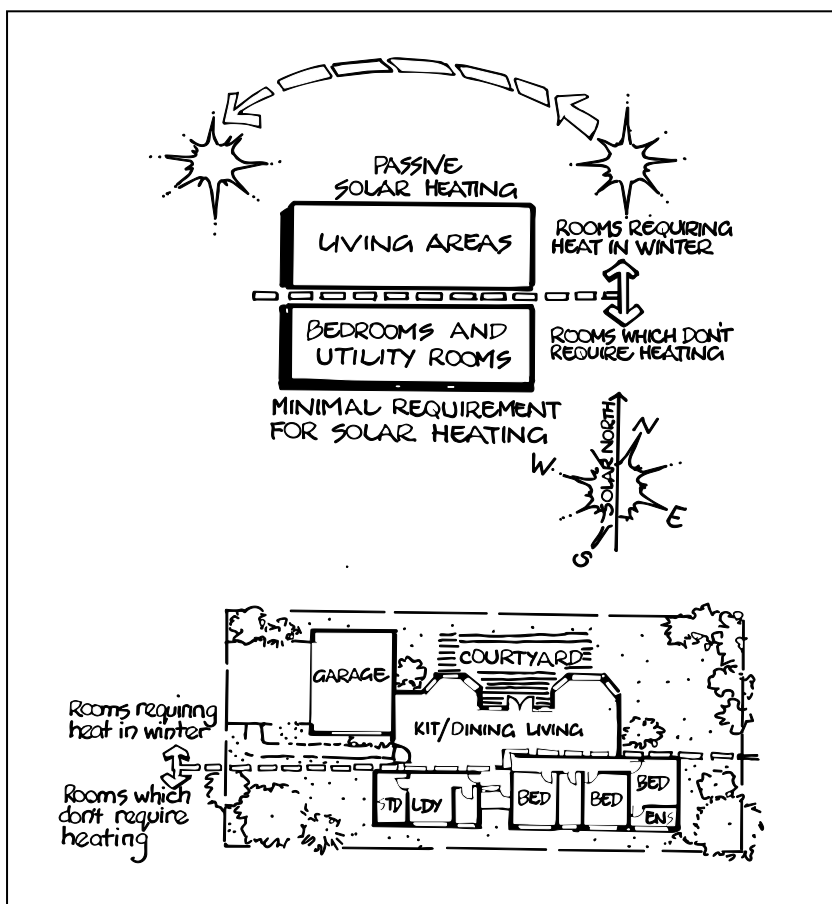
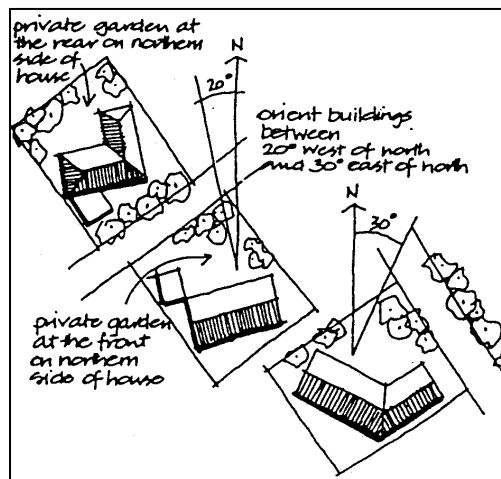


Figure C15.3.1: Dwelling design for solar access

C15.4 Thermal Mass and Building Colour

Background Principles

The term 'thermal mass' describes the ability of heavyweight materials to store thermal energy. Using materials with thermal mass in the floor or walls of a building enables those elements in the structure to:

- absorb heat from the sun during the winter day, and release that heat back into the living spaces at night or during cooler periods, producing more comfortable and even temperatures;

- absorb heat from the building during hot summer days as they have been cooled down via natural ventilation during the previous cooler evening ie. They provide a 'natural air conditioning' effect, resulting in more comfortable and even temperatures.

The colour of building materials affects the microclimate of a dwelling^(D). Generally, dark colours absorb heat and light colours reflect heat.

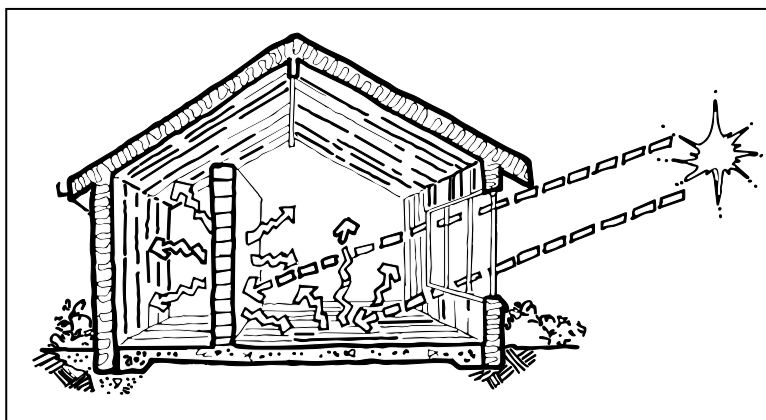


Figure C15.4.1: Thermal mass principles

Thermal Mass Objective

- To use building materials which help to stabilise the temperature of internal living spaces.

Preferred Outcomes

Thermal Mass

- The floor is commonly the most economical place to locate heavy thermal mass materials (eg. concrete slab) and its thermal performance will be best in north facing rooms receiving direct sunlight (see Figure C15.4.1).
- .
- Denser wall materials such as reverse brick veneer, cavity brick, concrete blocks, stone, mud brick, rammed earth and even contained water in walls, are also very useful in providing more comfortable internal room temperatures.
- Where external walls are lightweight and insulated, providing mass in internal walls minimises the daily temperature fluctuations and improves comfort considerably.

Material Colour

- On the north coast of NSW the roof is the dominant heat path. However, wall colour does have some importance. Darker colours, in absorbing more heat all year, have a bigger negative impact on summer comfort than they do a positive impact on winter comfort so are rated accordingly. Generally it can be said that the lighter the colour of roof the better.

C15.5 Shading

Background Principles

Shading elements such as eaves or awnings should be designed relative to the aspect of the windows requiring shade, considering the seasonal variations in the angle of the sun for each location and access to views.

Generally, major windows in dwellings^(D) should be shaded from direct sun during between 9.00 am and 3.00 pm during summer, and insulated with curtains. Shading

elements incorporated into an elevation must be integrated as design elements (see Figure C15.5.1).

Alternatively, high performance glass such as variable transmission glass (glass that only transmits certain wavelengths of light) can be combined with curtains.

Shading Objective

- To reduce the sun's solar heating effect on dwellings^(D), through the provision of suitable shading measures.

Preferred Outcomes

- External shading to north facing windows (see Figure C15.5.1) should provide maximum shading in summer with less shading required in winter. This type of shading can be simply provided by incorporating eave overhangs or fixed awnings designed to meet a 70° (from the horizontal) line drawn from the bottom of the window to the eave.
- Pergolas, verandahs and eaves to the western and eastern aspects should also be designed to maximise summer shade and where possible reduce winter shade, eg, by deciduous climbing vines on pergolas or operable louvres.
- Window shading devices suitable for all windows but particularly westerly and easterly windows include external blinds (fabric and louvre), shutters (both hinged and roller), awnings (both fixed and roller) and close-fitting curtains.

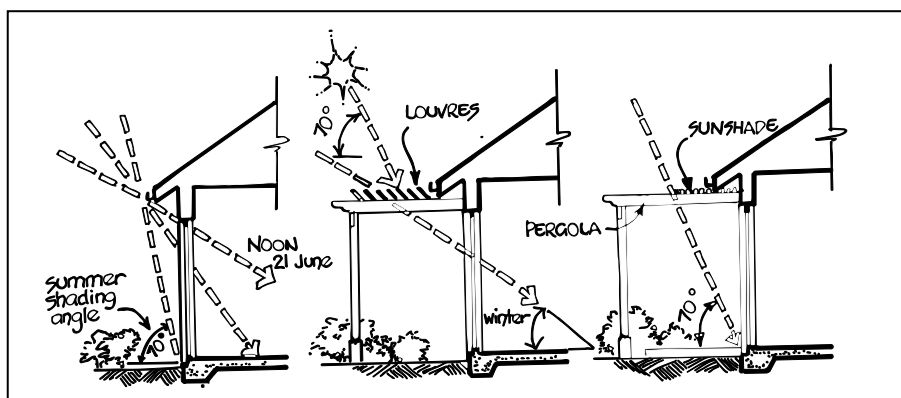


Figure C15.5.1: Window shading principles

C15.6 Ventilation

Background Principles

Natural ventilation is an important design feature for all dwellings^(D) subject to the warm, humid climate of Byron Shire. Natural ventilation is primarily achieved through the appropriate design and location of doors and windows.

Natural cross ventilation is induced by wind motion and is used most effectively during cool conditions in summer. Cross ventilation occurs more efficiently through a room with openings in opposite walls than through a room with openings in adjacent walls. High ceilings are preferable to low ceilings for coolness and ventilation in summer.

Designs should ensure security provisions for windows and doors, while still allowing for cross ventilation during summer. To maintain energy efficiency, winter winds and draughts need to be minimised by the application of seals around all door and window openings. Natural ventilation is preferable for underground car parks in Multi-dwelling housing developments.

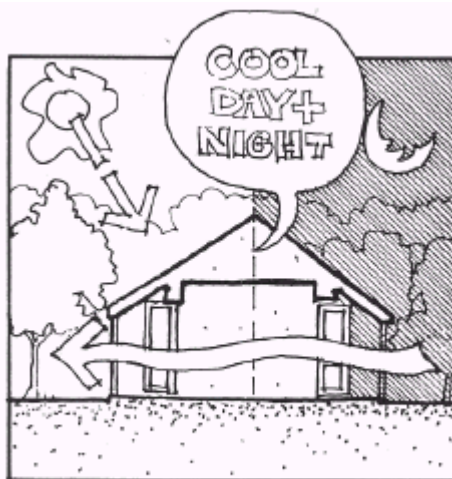


Figure C15.6.1: Ventilation principles. Source: North Coast Design Guidelines

Ventilation Objective

- To ensure that all dwellings^(D) can be adequately ventilated by the appropriate design and location of windows and doors.

Preferred Outcomes

- For summer conditions, a dwelling's^(D) openings should be designed to take advantage of prevailing wind direction; passive solar design not only takes advantage of cooling daytime breezes but depends on cool night-time ventilation to flush out the heat of the day so that the structure is cool for the next day (see Figure C15.6.1).
- The effectiveness of built-in cross ventilation depends on placement of openings to create breeze pathways (or breeze-paths) with minimum obstruction. Openings in a room are best placed in opposite walls to create air movement across the room and maximise the effect in that room.
- Ceiling fans provide assistance to both ventilation and personal cooling in summer.

C15.7 Heating and Cooling

Background Principles

If a dwelling^(D) is designed to optimise its passive solar potential, it is possible to all but eliminate the need for fuel-based space heating or cooling. Heating and cooling systems must target only those spaces which require heating and cooling. Where a heating/cooling system is installed, it must be selected for maximum energy efficiency to ensure the efficient distribution of warm and cool air. The choice of system must be compatible with and integral to the design of the individual dwelling^(D) in question.

Heating and Cooling Objectives

- To encourage dwelling^(D) designs which eliminate or reduce the need for fuel-based heating or cooling.
- To ensure that any mechanical heating or cooling will be energy efficient and minimize generation of greenhouse gases.

Preferred Outcomes

- Where financially feasible, zoned control systems should be employed with programmable thermostats in each zone.
- To maximise energy savings the control system can be employed to regulate the flow of air between zones by adjusting mechanised dampers in ductwork and regulating fan speed according to the number and size of zones being heated or cooled.
- Ductwork should be insulated to at least R1.5 and any refrigerant lines insulated with at least 20mm of foam insulation.

- Energy efficient or renewable energy space heating and cooling systems are recommended.
- If timber is chosen as a fuel source, it should be burned in high efficiency heaters (and preferably sourced from sustainable sources).
- In winter, it is important to be able to close off areas, so that only those areas which need heating are heated.

C15.8 Insulation

Background Principles

Insulation is an important component of energy efficient dwelling^(D) design, helping to eliminate or drastically reduce the need for mechanical heating and cooling systems, as well as enhancing the efficiency of any such systems. Insulation materials should be selected for the particular situation for which it is required ie. whether the insulation is being used for walls, floor, roof, or some other purpose.

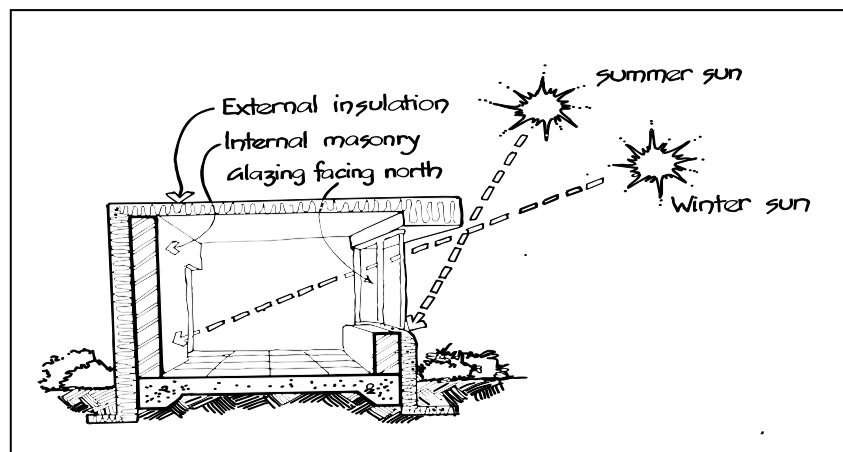


Figure C15.8.1: Insulation principles

Insulation in buildings should meet the levels specified in AS2627.1, 1993. The performance of insulation materials should meet the requirements specified in the appropriate Australian Standard for the material. In the case of synthetic mineral fibres (fibreglass and mineral wool) the applicable standard is AS3742. The performance of other insulation materials should be demonstrated by a NATA (National Association of Testing Authorities) registered laboratory and field studies to at least compare with the thermal performance of materials included in AS3742. Testing of individual insulations is to comply with AS2464. The installation of all insulation materials is to comply with AS3999 for bulk insulations or AS4200.2, 1994 for pliable building membranes.

Insulation Objective

To provide appropriate insulation measures to dwellings^(D) to reduce the need for artificial heating and cooling systems.

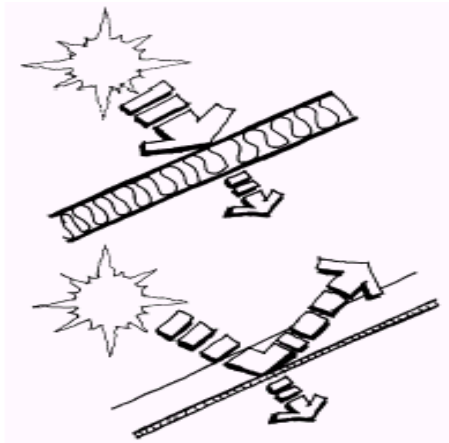


Figure C15.8.2: Insulation components

Top: Bulk insulation for roof and wall - Bottom: Reflective insulation in roof

Preferred Outcomes

Floors

Floors in contact with the ground are said to be thermally most efficient. Suspended floors, particularly of timber or sheet materials will benefit from enclosing the underfloor area and minimizing the air movement.

Walls

Generally the energy efficiency of all framed wall types will be assisted by using a minimum of reflective foil insulation.

Roof

- Metal deck roofing must use the foil backed bulk-insulating blanket;
- Tiled roofs greatly benefit from using reflective sarking.

Ceiling

The recommended level of bulk insulation to be installed in ceilings in the Byron Shire area is R2.5. However a rating of R1.5 may well be adequate subject to the other features of the home design.

Windows

Windows should preferably be minimized on the western walls. If they are necessary, consideration should be given to tinted glazing or external awnings, pergolas or landscape design that would shield them from direct sunlight. For homes with small floor areas, the amount of windows used becomes very important and, as a general principle, small floor areas should use less glass.

C15.9 Lighting

Background Principles

A dwelling^(D) should be designed to maximise availability of natural light without creating major heat gain or heat loss pathways. Preferably artificial lighting should not be necessary for general activities in a room during daylight hours.

A room should be lit according to its purpose. For example, a kitchen or family room requires an even spread of bright lighting. Other rooms such as living rooms require a mix of general and task lighting options. Layout of energy efficient lamps, fittings and switches in such rooms should allow several possibilities for lighting the room, such as low background lighting, supplemented by task or effect lighting for use as required. Separate switches could be used for special purpose lighting.

Lighting for common areas, car parks and stairwells in medium density developments^(D) should be energy efficient and should be time switched or motion sensitive. Consideration should be given to the use of solar powered external lighting.

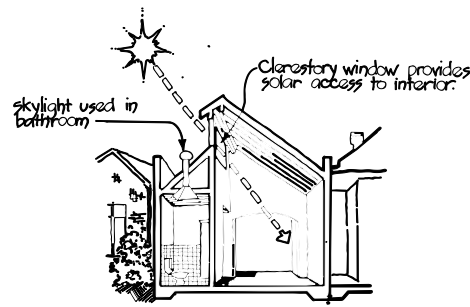


Figure C15.9.1: Lighting for dwellings with limited solar access

Lighting Objectives

- To encourage maximum use of natural light inside dwellings^(D).
- To minimise energy use for lighting.

Preferred Outcomes

Artificial Lighting

- Dwellings^(D) to be designed such that artificial light is unnecessary during daylight hours.
- Light switches should be located at main exits, to encourage the switching off lights when leaving rooms.
- Motion-detectors should be used for externally lighting doorways and entrances, or for outdoor security lighting.
- Dimmer switches should be used where practicable to provide flexibility in lighting levels.
- Fittings with high efficiency reflectors suitable for compact fluorescent lamps or fluorescent tubes should be used (these consume up to four times less electricity than standard incandescent light bulbs to provide the same level of light, and last up to eight times longer than incandescent bulbs).

Skylights and daylighting

Appropriate design of clerestory windows, including summer shading.

C15.10 Domestic Appliances

Background Principles

Domestic energy consumption is not only a function of the design, orientation and construction of a dwelling^(D). It is also a function of the choice of appliances used in a home for heating, lighting, cooling, refrigeration, cooking, washing/drying clothes and washing dishes. Therefore, improvements in energy efficiency can be made by installing energy efficient appliances.

Appliances Objectives

- To encourage the installation of energy efficient appliances that minimise the need for greenhouse gas generation.
- To maximise opportunities for use of solar energy for clothes drying

Preferred Outcomes

- Domestic appliances with maximum energy efficiency should be installed. Use appliances with as high a star rating as practically possible. In particular clothes dryers should wherever possible have a minimum rating of 3.5 stars and should have direct ventilation to outside.

- Thermostats are desirable with all central heating and cooling systems.
- All dwellings^(D) should preferably have access to an outdoor clothesline, located in a sunny position, .

C15.11 Swimming Pools

Background Principles

Many homes in the Byron Shire have outdoor heated pools which consume energy and, like domestic appliances, should be managed effectively to ensure energy efficiency. Not only should the appropriate heat source be chosen, but also the use of pool blankets should be considered.

Swimming Pools Objectives

To encourage the installation of energy efficient swimming pool heating and the use of pool insulating blankets that minimise the need for greenhouse gas generation.

Preferred Outcomes

- Swimming pools should be insulated to reduce the amount of energy needed to maintain water temperature and reduce heat losses.
- Heated pools and spas should rely greenhouse gas efficient systems for water heating.

C15.12 Landscaping For Energy Efficiency

Background Principles

Streets and public spaces in a subdivision can be designed to contribute to solar efficiency through the selection and location of suitable trees. Trees provide much needed shading to dwellings^(D), outdoor living areas (including verandahs and gardens) and public footpaths. . Care should be taken to select trees which, when mature, will not unduly shade solar collectors of adjoining properties. Many of the species native to Byron Shire are ideal shade trees for private gardens.

Trees, shrubs and grasses native to the Shire and region are preferred, as not only do they preserve the region's unique biodiversity, but they also require less maintenance and rely purely on rainfall for their water requirements. A list of such species, together with planting and landscaping principles, is contained in Chapter 1 Part H of this DCP.

Trees can also be used as wind breaks, and many native species are ideal for this purpose, provided that the potential conflicts between plant bulk and solar access are properly managed. Additionally, trees can be used to channel or deflect breezes to suit the required microclimate of a dwelling^(D) and its outdoor living areas.

Appropriate vines and creepers can provide a shading effect if planted in front of windows and verandahs. The process of transpiration, by which leaf moisture is converted to vapour, also provides a beneficial cooling effect in summer.

Landscaping for Energy Efficiency Objectives

- To achieve landscape design that promotes the energy efficiency of individual dwellings^(D).
- To ensure that solar access is maintained to all land and buildings. By assessing which trees are likely to create unwanted shadows as they mature, future conflicts are likely to be prevented.
- To encourage the use of trees native to the Byron Shire region, which reduces the need for water consumption and preserves biodiversity.

Preferred Outcomes

- Street tree species are selected to provide summer shading while not unduly impeding solar access to dwellings^(D) in winter.

- Garden trees are planted or retained so as not to impede solar access to solar collectors.
- Street trees contribute as winter windbreaks.
- Specific areas of a dwelling^(D) are targeted to receive sunlight in winter and shade in summer, through the appropriate location and choice of trees, shrubs, vines, creepers etc.
- Garden landscaping is used to protect against cool winter winds and to channel summer breezes.
- Select plantings with low maintenance and low water consumption. Generally, trees, shrubs and grasses native to Byron Shire should be used.
- Select densely growing species for windbreaks (such as Banksias, Tuckeroos) and plant them along south or west sides of area being protected against the wind.
- Variations in mature heights of different species of trees and shrubs should be taken advantage of for shading walls and windows.
- Consider sheltering outdoor space areas with vegetation. Vegetation can provide strong shadow effects in summer (eg. deciduous vine over a pergola, palm trees in courtyards) and should contribute significantly to comfort levels within a dwelling^(D).

Acknowledgments

Model Energy Smart Homes Policy New South Wales Sustainable Energy Development Authority (SEDA)

Policy development, project management and NatHERS/scorecard correlation's: Greenlight Consortium, comprised of Environs Australia and Manidis Roberts Consultants (Energy and local government consultant: David Baggs FRAIA)

'Solecta' energy checklist (scorecard basis) and NatHERS/scorecard correlation: Australian Institute of Building Surveyors

References

Commonwealth Department of Housing and Regional Development, 1995. AMCORD: A National Resource Document for Residential Development. AGPS, Canberra, 1995

Department of Planning (NSW), North Coast Design Guidelines, Sydney, 1989

Energy Victoria, Solar Access for Lots, Energy Victoria, Melbourne, 1996

Leichhardt Council, Development Control Plan No. 17 Energy Efficient Housing, Leichhardt, NSW, 1994

Manly Council, Development Control Plan for Energy Efficient Buildings, 1998, Manly, NSW, 1998

Sustainable Energy Development Authority (NSW), Energy Smart Homes Model Policy, Sydney, 1998

Further Information

For further information concerning the contents of this Part of the DCP, contact: Council's Local Approvals and Compliance Services Section, Byron Shire Council, PO Box 219 Mullumbimby 2482.

Telephone: (02) 6626 7000, Fax: (02) 6684 3018. E-mail: Council@byron.nsw.gov.au.

This Part of the DCP was produced by SEDA in conjunction with Byron Shire Council.

Attachment 1

Guide Notes for Energy Efficiency Compliance & Exemptions

1. Introduction

Council's Energy Efficiency (Energy Smart Homes) DCP requires that all residential development must achieve a **minimum energy rating of 3.5 stars** using an accepted energy rating technique for the proposed developments' building envelope and a minimum Greenhouse Gas Rating of 3.5 stars for the hot water system OR seek an Exemption from this provision.

The purpose of this Attachment is to outline the "accepted energy rating techniques" available and to provide information about how to seek an Exemption from Chapter 1 Section C15 of the DCP.

2. Information Required With Residential Development Applications

Each application for new developments must include an accepted energy rating for the building envelope and greenhouse gas rating for the hot water system. *NOTE: Minor alterations and additions to residential buildings do not need to meet this requirement unless the alterations and additions affect more than 50% of the existing internal floor space (garage floor space is not be included).* In the case of additions and alterations there is no requirement to meet the requirements for Hot Water Systems.

2.1 Construction Plans

The Construction Plans for the Development must clearly show the following information:

- North Point (This must be identified as either Magnetic North or True North). *True north is approximately 12° west of magnetic north in Byron Shire.*
- Information regarding the construction materials to be used.
- Colour of roof and walls (described as light, medium or dark)
- The type and location (walls, under roof, ceiling, underfloor) of insulation to be used. (including sisalation)
- Any variations to glazing such as the use of tinted or reflective glass.
- Floor covering types, if known, and where in the house they will be located. (eg: tiles, carpet, bare timber, etc.)
- Hot Water System type and size to be installed. (required only for new developments). Installation location also to be shown on the floor plans.

2.2 Energy Rating Techniques

Building Envelope

The following table describes the accepted techniques which apply to the various forms of Application. In this Table, three (3) different forms of energy rating technique exist.

Development Type	Deemed to Comply Certificate	Scorecard	NatHERS
Single Dwelling ^(D) & Dual Occupancy ^(D)	✓	✓	✓
Residential Flat Building			✓

Table 1

- Deemed to Comply Certificate. This Certificate has been developed to form the easiest form of application and embraces the basic principles of The Energy Smart Home. By complying with ALL sections of the current Certificate, Byron Shire Council

deems that the intent of Chapter 1 Section C15 of DCP 2010 has been complied with.
NOTE : ALL Sections of the Certificate MUST BE complied with.

- Byron Shire Council Energy Rating Scorecard. This Scorecard itemises each component of the building and provides a point score. The Scorecard is not an exact energy rating technique however provides confidence that the home will Chapter 1 Section C15 of DCP 2010.
- NatHERS Certificate or its equivalent. This certificate is issued by Accredited Assessors who are trained in the use of the Nationally Accredited House Energy Rating software – NatHERS, or other approved software. A schedule of accredited NatHERS assessors is available at Council's offices.

2.3 Hot Water System

If the Application is for a new dwelling^(D) and proposes any of the following type of systems then an Exemption Certificate must be lodged.

- Electric
 - Instantaneous
 - Continuous
 - Storage

The Exemption Certificate uses a financial costing, over a seven (7) year period, to compare the cost effectiveness of one of the above forms of inefficient hot water systems to a complying hot water system. If it can be shown that that the electric system is more cost effective than the complying equivalent then an Exemption will be granted.

Attachment 2

“Deemed to Comply” Certificate

Current From : 1 May 2002 .

ORIENTATION	
	At least 50% of the floor area of living areas are sited on the northern side of the building. <i>NOTE: - North is defined here as being within the range of 32° west of magnetic north and 18° east of magnetic north.</i>
THERMAL MASS	
	Lower floor is constructed of concrete slab, or timber floor with either enclosed underfloor or underfloor with minimal venting.
ROOF	
	Roof eaves have a minimum width of 600mm and provided at least on all north, west and east facing walls.
	Roof colour is LIGHT.
	Metal deck roof has foil backed insulation blanket or tiled roof has sisalation (foil) laid under it.
VENTILATION & ZONING	
	A minimum of two (2) breeze paths are provided through the building. (ie: windows are located on opposite or adjacent walls). <i>NOTE: At least one breeze path is to be through the major living areas.</i>
INSULATION	
	R2.5 grade insulation is installed in all ceilings (excluding garage)
GLAZING	
	West facing windows are either covered with external awnings, a covered pergola of minimum width of 2.5 m or have a total glazed area of less than 2m ² . <i>NOTE: West is defined here as being within the range 125° and 35° west of magnetic north.</i>

I, certify that all of the above mentioned features will be incorporated into the building design and construction for the building proposal at

.....
.....

Signature

Date.....

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

Attachment 3

House Energy Rating Assessment Score Card

PLEASE ENSURE ALL SECTIONS BELOW ARE COMPLETED

Application No: Date:

Applicant:

Building Address:

NOTES :

1. "North" refers to 'true north', which is approx. 12° west of Magnetic north.
2. When directions are specified they refer to the range of angles 45° either side of the compass point. (The compass points must then be adjusted 12° west of Magnetic North to correct for 'true north'.)
3. Do not include garages in these calculations.
4. "Covered" is defined as an awning/eave GREATER THAN 450mm wide AND LESS THAN 300mm above the top of a window OR a direct external covering such as a roller blind.

CALCULATIONS PAGE

Floor Area (m²) = Window Area (m²) = Ratio =

$\frac{\text{Window}}{\text{Floor}}$
= 0

NOTE : Perform the calculation on **Compensated Window Area ONLY IF R > 0.15**

Compensated Window Area Calculation			
		Window Area (m ²)	Answer
Area of tinted & reflective glass or double glazing	0.3 x	<input type="text"/>	= <input type="text"/>
Area of north facing COVERED windows	0.5 x	<input type="text"/>	= <input type="text"/> +
Area of WESTERN windows covered by pergola with a minimum width of 3.0m	0.3 x	<input type="text"/>	= <input type="text"/> +
		SubTotal 1	= <input type="text"/>
All windows (whether covered or uncovered):			
		Area (m ²)	
North face	0.3 x	<input type="text"/>	= <input type="text"/> +
East face	0.2 x	<input type="text"/>	= <input type="text"/> +
South face	0.1 x	<input type="text"/>	= <input type="text"/> +
West face	0.7 x	<input type="text"/>	= <input type="text"/> +
		SubTotal 2	= <input type="text"/>
S = Compensated Window Area = Subtotal 1 MINUS Subtotal 2			
S =	<input type="text"/>	-	<input type="text"/> = <u>This may be a negative number</u>

CALCULATION FOR WINDOW FACTOR (result to be used over the page in Section 1.4)	
If Ratio is GREATER THAN 0.3 then SUM TOTAL = Compensated Window Area (S)	<input type="text"/>
A	
If Ratio is LESS THAN 0.15 then SUM TOTAL = (6 – 22R)	<input type="text"/>
B	
If Ratio is EQUAL TO or BETWEEN 0.15 AND 0.3 then SUM TOTAL = S x (R/0.15-1)	<input type="text"/>
C	

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

ADD THE TOTALS ON THIS PAGE

1.0 BUILDING	Points	
1.1 Skylights (multiply area by point factor)		
Double glazed or shaded ()m ² x 0.5 =	=	
Single Glazed ()m ² x -0.5 =	=	
1.2 Wall Colour		
Light or medium	1	
1.3 Roof Colour		
Light	5	
Medium	0	
Dark	-5	
1.4 Windows		
→ Take answer A, B, or C from bottom of previous page (round off the actual answer to the nearest 0.5)		
2.0 THERMAL MASS		
2.1 Ground Floor ONLY		
Concrete slab	3	
Timber (enclosed or minimal venting under)	0	
Timber (open underneath)	-4	
2.2 Walls-internal- north facing living areas		
Brick, stone, water or earth walls	3	
Autoclaved aerated concrete (AAC)	2	
3.0 ORIENTATION of LIVING AREAS		
3.1 If long direction does not faces north (must have windows > 4m ²)	-2	
4.0 VENTILATION		
4.1 Ventilation through living area		
More than one breeze path (no doors in pathway except front door)	3	
5.0 INSULATION		
5.1 Upper Floor (Top level – and only if more than 1 storey)		
Concrete	2	
Timber	-1	
5.2 Walls (applies to type of greatest percentage)		
Insulated AAC or Double Brick	4	
Brick veneer + R1.0 insulation	2.5	
Brick veneer with sarking	2	
Timber or Fibrous Cement (F.C.)+ R1.0 insulation	1.5	
Timber or F.C. + sarking	1	
Uninsulated Brick veneer	0	
Timber or F.C.	-2	
5.3 Roof		
Insulated metal deck roofing	5	
Metal deck roofing	-4	
Tiled roof with sarking	1	
Tiled roof with no sarking	-3	
5.4 Ceiling (if single storey)		
R1.5 throughout	12	
R2.5 or greater (throughout)	15	
Ceiling (if multi storey)		
R1.5 throughout	9	
R2.5 or greater (throughout)	12	
TOTAL =		

IF TOTAL SCORE EQUALS OR IS GREATER THAN 15 THE DWELLING IS 3½ stars.

EXAMPLE - House Energy Rating Assessment Score Card

PLEASE ENSURE ALL SECTIONS BELOW ARE COMPLETED

Application No: Date:

Applicant:.....

Building Address:

NOTES :

- 5. "North" refers to 'true north', which is approx. 12° west of Magnetic north.
- 6. When directions are specified they refer to the range of angles 45° either side of the compass point. (The compass points must then be adjusted 12° west of Magnetic North to correct for 'true north'.)
- 7. Do not include garages in these calculations.
- 8. "Covered" is defined as an awning/eave GREATER THAN 450mm wide AND LESS THAN 300mm above the top of a window OR a direct external covering such as a roller blind.

CALCULATIONS PAGE

Floor Area (m²) = 148 Window Area (m²) = 31.15 Ratio = 0.21

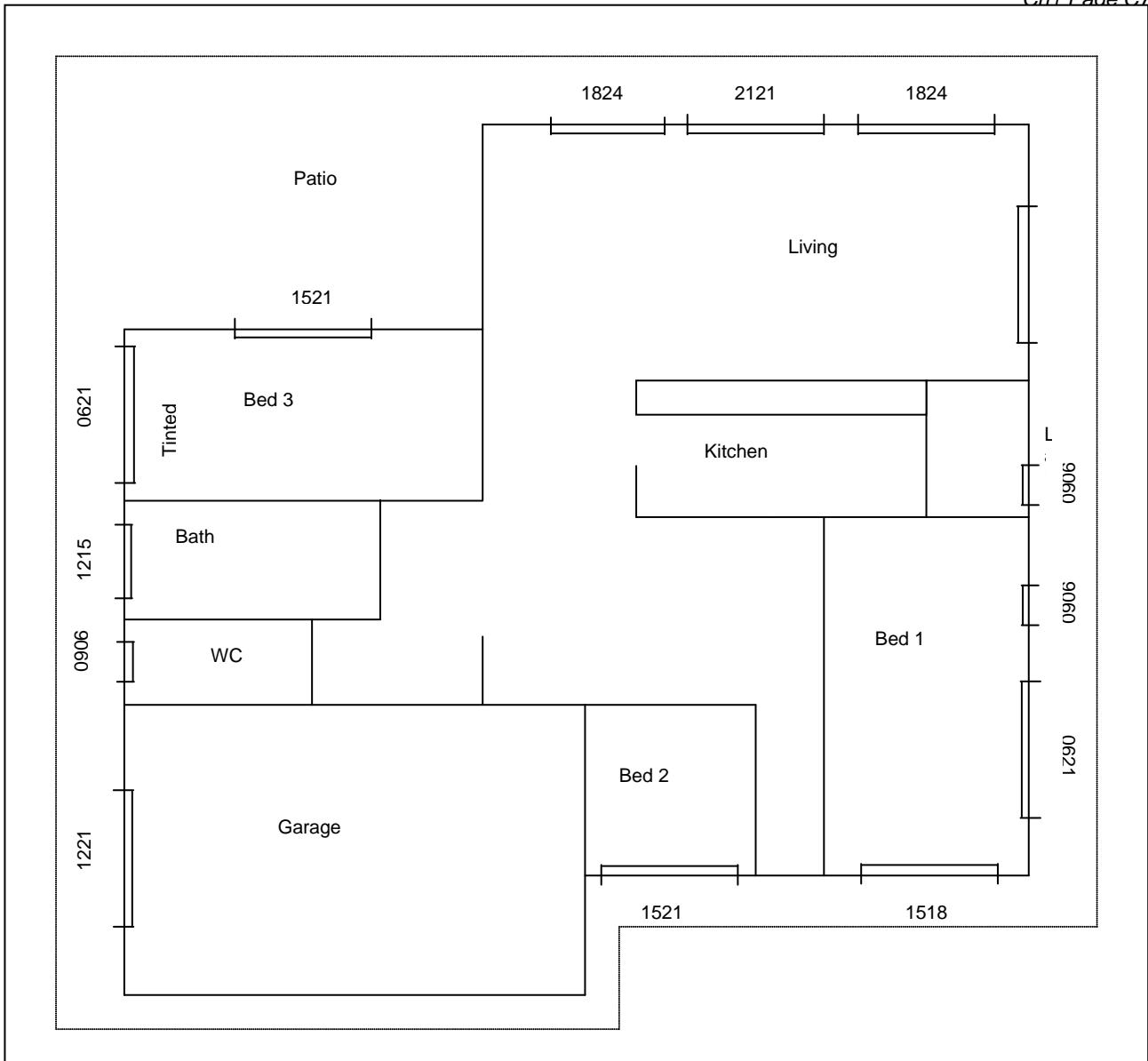
NOTE : Perform the calculation on **Compensated Window Area ONLY IF R > 0.15**

Compensated Window Area Calculation			
		Window Area (m ²)	Answer
Area of tinted & reflective glass or double glazing	0.3 x	1.26	= 0.378
Area of north facing COVERED windows	0.5 x	16.2	= 8.1 +
Area of WESTERN windows covered by pergola with a minimum width of 3.0m	0.3 x		= +
SubTotal 1			= 8.478
All windows (whether covered or uncovered):			
		Area (m ²)	
North face	0.3 x	16.2	= 4.86 +
East face	0.2 x	5.94	= 1.188 +
South face	0.1 x	5.85	= 0.585 +
West face	0.7 x	3.6	= 2.52 +
SubTotal 2			= 9.153
S = Compensated Window Area = Subtotal 1 MINUS Subtotal 2			
S =	8.478	-	9.153 = <u>This may be a negative number</u> -0.675

CALCULATION FOR WINDOW FACTOR (result to be used over the page in Section 1.4)	
If Ratio is GREATER THAN 0.3 then SUM TOTAL = Compensated Window Area (S)	
A	
If Ratio is LESS THAN 0.15 then SUM TOTAL = (6 – 22R)	
B	
If Ratio is EQUAL TO or BETWEEN 0.15 AND 0.3 then SUM TOTAL = S x (R/0.15-1)	-0.27
C	

The answer becomes '-0.5' FOR QUESTIONS 1.4 - rounded off to the nearest 0.5)

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP



Window Area (all covered with 600mm eaves)

- North Face = 16.2m²
- East Face = 5.94m²
- South Face = 5.85m²
- West Face = 3.6m²

(Note: Garage windows are excluded)



Attachment 4

Guide Notes for Exemption from DCP for Building Envelope

1. Introduction

Chapter 1 Section C15 of DCP 2010 provides for the relaxation of the compliance requirements for the Energy Efficiency requirements of the DCP under certain circumstances.

2. Circumstances Providing For Exemption

Options for Exemption of the Building Envelope not achieving a 3.5 star rating are:

- a) Novel construction – where the prescribed assessment techniques do not address or reliably assess the performance of the construction being adopted and there are prima facie grounds for believing the prescribed techniques significantly underestimate the building envelopes performance.
- b) Conflicting Guidelines – existing lease and development conditions, other Development Control Plans, Australian Standards or any Policy or Guidelines that Council determines will have priority over this Plan, eg: heritage requirements, which preclude the attainment of the minimum rating requirements.
- c) Adverse impact on material amenity of adjoining land and buildings.
- d) Non-consistent or invalid results from approved computer software tools.
- e) Block orientation, geometry or topography constraints which significantly restrict the development.
- f) Existing overshadowing of the development site^(D).
- g) Uneconomic evaluation – where it can be shown that the attainment of the 3.5 star rating would require additional expenditure which is not cost effective within a ten (10) year period. Further details regarding this matter, including application forms for exemption, can be found in attachment 4 to this section of the DCP.

3. Application for Exemption

Complete the attached sheet entitled “Application for Exemption from the Building Envelope requirements of Section C15 of Byron Shire DCP 2010” and lodge it as part of your development application or complying development application. Should the Exemption be based on the argument of Option g), then the application must be accompanied by the following information:

1. NatHERS Certificate with the specifications and design as submitted (to be known as the Submitted Design Rating – **SDR**) (NOTE: this is the design for which an exemption is sought) and;
2. NatHERS Certificate with the minimum possible amendments to the specifications and design such that the application would comply with the DCP (such amendments must be clearly noted and distinguished from the desired building format) (to be known as the Complying Design Rating – **CDR**) (NOTE: this is the design which would comply with the DCP)
3. Documentary evidence of the costs of compliance over and above the Submitted scheme. Such evidence to include detailed builders and/or suppliers and/or subcontractors quotes for both labour and materials. Where information from these

sources is not available, costs must be justified with reports from either architects, building designers or qualified cost consultants using referenced information from third party organisations such as Cordells or Rawlinsons cost guides and providing an appropriate level of detail to Council satisfaction.

4. Grounds for Application for Exemption

For an Exemption to succeed it **must** soundly argue the justification for the Exemption and use appropriate documentation or if necessary expert opinion, or if Option g) is the basis for the Exemption it **must** demonstrate, using the above documentation, that the **Cost of Compliance exceeds the Compliance Cost Saving**, evaluated over a 10 year period, where –

$$\text{Cost of Compliance (in \$)} = [\text{\$CDR} - \text{\$SDR}]$$

\\$CDR = cost to build the Complying design

\\$SDR = cost to build the non-complying design

$$\text{Compliance Cost Saving (in \$)} = \text{Floor area} \times \text{Energy Saving} \times 1.5 \text{ (10 year evaluation)}$$

Area = floor area of dwelling^(D) measured to outside walls and excluding garages, (m²) laundries, storerooms, and other non-livable areas.

Energy Saving = **difference** between the NatHERS Energy ratings for both options. (kW/ m²)

**Application for Exemption from the
BUILDING ENVELOPE
Requirements of Section C15 of Byron Shire DCP 2010**

I,
of
(Applicant's name & address)
certify that the proposed
(insert dwelling, dual occupancy, etc.)
at
.....
(insert building address)

cannot achieve the required energy efficiency rating in Section C15 of Byron Shire DCP 2010 relating to the building envelope for the reason(s) below:

- a) Novel construction – where the prescribed assessment techniques do not address or reliably assess the performance of the construction being adopted and there are prima facie grounds for believing the prescribed techniques significantly underestimate the building envelopes performance.
- b) Conflicting Guidelines – existing lease and development conditions, other Development Control Plans, Australian Standards or any Policy or Guidelines that Council determines will have priority over this Plan, eg: heritage requirements, which preclude the attainment of the minimum rating requirements.
- c) Adverse impact on material amenity of adjoining land and buildings.
- d) Non consistent or invalid results from approved computer software tools.
- e) Uneconomic evaluation – attach the necessary quotations and NatHERS Energy assessments as detailed in and show the Compliance Cost calculations as detailed in - “GUIDE NOTES FOR EXEMPTION FROM ENERGY EFFICIENCY DCP FOR BUILDING ENVELOPE”.

Cost of Submitted Design Rating (SDR) = \$
SDR NatHERS Rating (kWh/ m²) =
Cost of Compliance Design Rating (CDR) = \$
CDR NatHERS Rating (kWh/ m²) =
Livable floor area (m²) =
Cost of Compliance : \$
Compliance Cost Saving: \$

Therefore the Cost of Compliance is GREATER THAN the Compliance Cost Saving.

.....
Signature of Applicant Date

NOTE : Each application will be assessed on its merits and determination will be at Council's discretion

Development Control Plan 2010 – Chapter 1 Part C - Residential Development
Adopted 3 March 2011 Effective 31 March 2011 (#1068488)

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

Attachment 5

Guide Notes for Exemption from DCP for Hot Water Systems

1. Introduction

Section C15 of Byron DCP 2010 provides for the relaxation of the compliance requirements for Hot Water Systems under certain circumstances. For water heaters these circumstances relate to “uneconomic” justification. This means that exemption may be provided where it can be shown that the installation of a -complying water system would require additional cost over a seven (7) year period. This document explains the process for applying for Exemption.

2. Circumstances Providing For Exemption

If the Application is for a new dwelling^(D) and proposes any of the following type of systems then an Exemption Certificate must be lodged.

Electric - Instantaneous
 - Continuous
 - Storage

The Exemption Certificate uses a financial costing, over a seven (7) year period, to compare the cost effectiveness of one of the above forms of inefficient hot water systems to a complying hot water system. If it can be shown that that the electric (non-complying) system is more cost effective than its complying equivalent then an Exemption may be granted.

NOTE: The quoted capital cost of the complying Hot Water system must be reduced by . ALL available Government discounts applicable at the time.

3. Application for Exemption

Complete the attached sheet entitled – “Application for Exemption from the Hot Water Requirements of Byron Shire DCP 2010”.

Applications must be accompanied by quotations for the supply of the two types of Hot Water systems to be compared.

Other costs for the comparison calculations are on the attached “Application for Exemption from the Hot Water Requirements of Byron Shire DCP 2010”.

**Application for Exemption from the
HOT WATER REQUIREMENTS
Requirements
of Byron Shire DCP 2010**

I,

 (Applicant's name & address)

certify that the installation of a complying Hot Water System at

 (insert building address)

is not economically viable over a 7 year period.

CALCULATION :

	PREFERRED HOT WATER SYSTEM	SOLAR HOT WATER SYSTEM	HEAT PUMP
HWS size L			
No. of bedrooms			
Purchase Price <small>(quotation provided)</small>	\$	\$	\$
Installation Price <small>(as per attached std. Costings)</small>	\$	\$	\$
7/year Running Cost	\$	\$	\$
Total Cost :	\$	\$	\$

Therefore the cost of Compliance is GREATER THAN the cost to install a non-complying Hot Water System.

.....
 Signature of Applicant

.....
 Date

NOTE : Each application will be assessed on its merits and determination will be at Council's discretion.

Note: ^(D) = definition included in Chapter 1 Part A7 of this DCP

HOT WATER SYSTEM
“RUNNING COST” GUIDE NOTES
 (BYRON SHIRE AREA)

as at 1 July 2003

SIZE OF HOME & HWS	ANNUAL ENERGY CONSUMPTION (kWh)	ELECTRICITY TARIFF (cents/unit)	7/YR RUNNING COST (\$)
1 & 2 BEDROOM			
Electric 250L or >	3640	5.06	\$1,462
160L	3398	8.14	\$2,072
< 160L	2548	13.52	\$2,411
Solar (electric) 300L or >	1019	8.14	\$716
Heat Pump 270L	1133	8.14	\$782
3 BEDROOM			
Electric (or 250L dual element) 315L or >	5460	5.06	\$2,109
160L – 250L	5096	8.14	\$3,040
< 160L	3822	13.52	\$3,617
Solar (electric) 300L or >	1529	8.14	\$1,008
Heat Pump 270L	1699	8.14	\$1,104
4 BEDROOM			
Electric (or 315L dual element) 400L or >	7280	5.06	\$2,754
250L – 315L	6795	8.14	\$4,008
(single element) < 250L	5096	13.52	\$4,823
Solar (electric) 300L or >	2039	8.14	\$1,298
Heat Pump 270L or >	2316	8.14	\$1,456
5 BEDROOM or >			
Electric (dual element) 400L	9101	5.06	\$3,399
250L – 315L	8494	8.14	\$4,976
(single element) <250L	6370	13.52	\$6,029
Solar (electric) 300L or >	2548	8.14	\$1,588
Heat Pump 270L or >	2831	8.14	\$1,749

***These costs incorporate “Supply Availability Charges”**

Source: Extracted from SEDA Energy Smart Homes Policy, further derived from NSW Department of Energy data published in 1996 in the brochure 'Comparative Hot Water Costs'