

Bellingen Shire  
Development Control Plan 2017

Chapter 18  
Regenerative Villages

## 18.1 Aims

The general aims of this chapter are:

- (a) To set out in more detail the objectives to be achieved when developing regenerative villages,
- (b) To provide flexibility in the achievement of those objectives and so encourage innovation and creativity.

## 18.2 Where This Chapter Applies

The provisions of this chapter apply to land identified in the “Potential Regenerative Village Development Area Map” upon which a Regenerative Village is proposed to be developed.

## 18.3 When This Chapter Applies

This chapter applies when Council is considering, pursuant to clause 7.11 of the Bellingham Local Environmental Plan 2010:

- (c) A planning proposal to modify the LEP and enable a Regenerative Village to be developed on certain land, and
- (d) A development application to develop a Regenerative Village, including a concept development application.

## 18.4 Definitions

**Regenerative Village** is a settlement that has been designed:

- (a) in accordance with the principles of the Circular Economy, and
- (b) as a system that integrates food, water, energy, transport infrastructure and the built environment.

**Circular Economy** is an economic system based on the following three principles:

- (a) eliminate waste and pollution,
- (b) keep resources and products circulating within the system, and
- (c) regenerate natural systems.

All other definitions of development are the same as those provided in Bellingham Local Environmental Plan 2010.

## 18.5 Concept Development Applications

Pursuant to section 4.22 of the Environmental Planning and Assessment Act 1979 a concept development application may be submitted in satisfaction of a requirement to prepare a development control plan.

Clause 7.11(3) requires the preparation of a site-specific development control plan.

A concept development application prepared in satisfaction of clause 7.11(3) shall be generally consistent with the provisions in this chapter.

## 18.6 Development Objectives

### 18.6.1 *One Planet Living*

Match the population of the village to the capacity of the land and its infrastructure. This ensures that the demand for food, water, energy, and housing does not exceed the capacity of the local infrastructure and ecosystems. Assume a fixed population and design the infrastructure at a scale that supports the pre-determined population, preferably so that supply of these basic necessities exceeds demand.

An additional benefit of planning for a discrete population, and matching local supply with local demand, is that it allows waste and pollution to be designed out. Organic materials can be kept in circulation to improve soils and regenerate natural systems. The systems then satisfy the requirements for a circular economy.

### 18.6.2 *Maximise diversity*

Natural systems are more productive and more resilient as biodiversity increases. Mimic this diversity in all infrastructure systems. Food systems should include a wide range of fungi, plants, animals—including aquatic species in the reservoirs—not just to feed the humans but complement and support the ecosystem as a whole. With respect to energy, provide a wide range of generation and storage options. In the built environment, provide a diverse range of flexible, multipurpose spaces. Express diversity in respect of multiple users and multiple purposes for any space.

### 18.6.3 *Maximise energy harvesting, minimise energy losses*

Maximise the amount of input energy that is harnessed, whether with solar panels, other technology or by plants. Also minimise the energy that is lost as waste. For inorganics explore the provision of waste-to-resource micro-factories.

### 18.6.4 *Enhance ecosystems*

Natural systems are designed to convert waste into resources and to constantly regenerate. Aim to enhance the capacity of the environment to provide these ecosystem services. For example, a closed water cycle can mimic the natural water cycle and provide an endless supply of water. Create integrated ecosystems such that organic waste can improve soil health or increase soil volume to retain more water. Water could be used to generate and store energy, while passively designed buildings can minimise energy demand.

#### 18.6.5 *Maximise Productive efficiency*

Efficiency is the ratio of energy inputs to energy outputs. Minimise the energy needed to deliver the required outputs—particularly food, water, electricity, mobility services and shelter. Aim to eliminate fossil fuel energy and minimise the human labour needed to deliver these basic necessities for all in the village. Use of durable labour-saving devices and technologies. Enhance ecosystems so that they provide a wide range of ecosystem services.

#### 18.6.6 *Maximise Distributive efficiency*

Save energy by minimising the distance resources and goods are transported. That is, strive to maximise local production for local consumption. For goods not able to be produced within the village, collaborate firstly with neighbouring villages, then others within the bioregion before looking beyond. For fabricated goods, aim to minimise the mass of the object being transported. This can be done by transporting the 'blueprints' electronically and have the item produced locally with a 3D printer.

#### 18.6.7 *Maximise durability*

The longer things last, the less work is needed to fix or replace them. In contrast to the current disposable, consumer culture, greater durability means a longer lifecycle for all products and buildings. The most durable could be defined as sustainable—able to be sustained in a functioning form for a very long time or even indefinitely. Building design and construction should consider each design element in terms of maximising durability.

#### 18.6.8 *Enable sharing and collaboration*

Share spaces and utilise spare capacity. Online sharing economy platforms facilitate the transition from ownership to access by enabling the use of spare capacity, for example in buildings, cars, tools, or land. In addition to shared infrastructure, the regenerative village should incorporate assets, facilities and spaces that can be shared. Designs should create 'degrees of privacy' without resorting to exclusive ownership. Residents will have use of, access to, and be responsible for, various parts of the settlement. Rather than individual owners of land, residents should be offered the opportunity to collectively own and steward the ecosystem of infrastructure and natural assets.

#### 18.6.9 *Maximise connectivity*

Regenerative villages should not be regarded as isolated places but as nodes within a broader network. Provide high quality internet access for virtual connectivity and create a network of shared electric vehicles and charging stations for physical connectivity. Also, whilst each village would produce the basic needs for its residents and guests, it would still rely on the broader network for the satisfaction of more complex needs or to share rarer skills. Design interdependence into each settlement, perhaps with each village providing some goods or services for the broader network. The complementarity of settlements, particularly within a bioregion, would guarantee a wide range of goods and services for all.

## 18.7 Development Criteria

### 18.7.1 *Development objectives*

In the assessment of likely economic, social, and environmental impacts of the development on the environment and wider locality, consideration shall be given to the extent to which the proposal satisfies the design objectives.

### 18.7.2 *Residential and Tourist & Visitor Accommodation*

Regenerative Village developments enable both long and short-term accommodation taking a range of forms including multi-dwelling housing, co-living housing, shop-top housing, hotel or motel accommodation, caravan park, or any combination of these.

#### **Aims**

- 1) To create a diverse environment for people at different life stages and with different housing requirements,
- 2) To encourage flexibility in housing design, and
- 3) To improve the affordability of housing by reducing the size of private dwellings, while complementing these with a wide variety of shared spaces, services and facilities.

#### **Criteria**

- 1) The design and layout of accommodation shall take into consideration the development objectives in this chapter,
- 2) A buildings and facilities plan of management shall be submitted outlining the purposes for which various shared spaces will be used, any access limitations, and management responsibilities,
- 3) To ensure a certain degree of consistency with other developments in the Local Government Area, consideration shall be given to any controls relevant to each of these forms of accommodation as follows:
  - (a) For multi-dwelling housing, shop-top housing and rural workers' dwellings, Chapter 2 – Multiple Dwelling Construction
  - (b) For farm stay accommodation, bed and breakfast accommodation, hotel or motel accommodation and caravan park, Chapter 4 – Tourist Development, and
  - (c) For co-living housing, Part 3 of Chapter 3 of State Environmental Planning Policy (Housing) 2021.
- 4) To encourage diversity within the development and to complement housing outside the development, the following controls shall be satisfied:

- (a) For the purposes of determining the number of residents in the village, the assessing authority may assume that the number of bedrooms equals the number of residents.
- (b) The overall structure of dwellings in the village shall generally reflect the occupancy rates of dwellings in NSW. The NSW averages for number of occupants per dwelling shall be adopted and applied to the number of bedrooms per dwelling in accordance with table 1 below:

*Table 1 Occupants per dwelling in NSW guiding the proportion of dwellings of different sizes*

Occupants per dwelling in NSW (2021 Census)		
1	25%	Bedsitters and one-bedroom dwellings
2	33%	Two-bedroom dwellings
3	16%	Three-bedroom dwellings
4 or more	26%	Four-bedroom dwellings

Given the maximum of 200 bedrooms in the village, the maximum number of each of these dwelling sizes is to be in accordance with table 2 below:

*Table 2 Maximum number of dwellings of different sizes*

Dwelling size	Maximum number of dwellings	Occupants
Bedsitters and one-bedroom dwellings	20	20
Two-bedroom dwellings	27	54
Three-bedroom dwellings	13	39
Four-bedroom dwellings	22	88
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- (c) No more than 25% of bedrooms shall be characterised and used as tourist and visitor accommodation,
- (d) Any sites provided for caravans or campervans shall be counted as bedrooms for the purposes determining the total number of bedrooms provided on site.

### 18.7.3 Retail activities

#### Aim

- 1) To provide opportunities for the sale of goods produced on-site.

## **Criteria**

- 1) The design and layout of retail activities shall take into consideration the development objectives in this chapter,
- 2) Retail activities will only be approved if they can demonstrate that they are primarily providing an outlet for goods produced on-site.

### *18.7.4 Industrial activities*

#### **Aim**

- 1) To provide opportunities for light industrial activities involved in the conversion of waste material into useful resources or products.

#### **Criteria**

- 1) The design and layout of industrial activities shall take into consideration the development objectives in this chapter,
- 2) Light industrial activities will only be approved if they can demonstrate that their primary purpose is to recover, recycle, repurpose, remanufacture, refurbish, repair, or reconstitute products or materials that would otherwise be discarded as waste.

### *18.7.5 Advertising and Signage*

The provisions of Chapter 7 – Advertising Signage shall be taken into consideration, although pole signs shall not be approved under any circumstances.

### *18.7.6 Site setbacks and buffers*

The provisions of Section 1.6.1 and 1.6.2 of Chapter 1 – Single Dwellings shall be taken into consideration.

### *18.7.7 Building Height Plane Envelope*

The provisions of Section 1.6.3 of Chapter 1 – Single Dwellings shall be taken into consideration.

### *18.7.8 Open Spaces, Landscaping and Regenerative Agriculture*

Regenerative villages comprise significant open space, which should be utilised to its maximum potential for a variety of purposes.

#### **Criteria**

- 1) An open spaces plan shall be submitted describing the various uses and access requirements for the substantial open space provided in a regenerative village development. The open spaces design shall accommodate and encourage a wide variety of uses and, where possible, multiple functions for use at different times. The open spaces plan shall identify spaces:

- (a) that are for the exclusive use of individual dwellings, groups of dwellings, or segments of the community,
  - (b) that are also accessible to visitors,
  - (c) that are for passive and active recreation or for productive activity such as agriculture, and
  - (d) that are used as buffers to minimise bushfire risk and impacts on adjoining properties.
- 2) Detailed Landscaping documentation by an appropriately qualified person shall be submitted with any proposal for a regenerative village satisfying the requirements of Chapter 9 – Landscaping Requirements and taking into consideration the development objectives in this chapter.
- 3) Additionally, the development of the landscaping plan shall be informed by a person with appropriate qualifications and expertise in regenerative agriculture, making provision for the following:
- (a) Integration with the water system for irrigation of crops and watering of animals,
  - (b) Maximising diversity of food produce, aligning this with the expected consumption demands of the resident community, and
  - (c) Maximising the inter-relationship between species, converting the waste of one into the feedstock of others wherever possible, creating natural systems of organic waste recycling on site.

#### *18.7.9 Water supply, sewerage, and stormwater*

Regenerative villages are generally located beyond the extent of existing water supply, sewerage, and drainage infrastructure, requiring that these services be provided on site.

##### **Criteria**

- 1) In developing the water infrastructure, the following matters shall be taken into consideration:
- (a) The development objectives in this chapter, and
  - (b) The provisions of Chapter 12 – Stormwater, with the treatment of stormwater quality satisfying level 3.
- 2) Water infrastructure systems shall satisfy the following requirements:
- (a) An integrated water cycle management plan shall be submitted for all regenerative village developments. This shall illustrate how the entire water cycle is managed, including integration of stormwater conveyance and treatment systems, potable and non-potable water supply, wastewater treatment and re-use, and management of waterway health,



- (b) Natural, or nature-based, infrastructure systems shall be preferred to mechanical systems for storing, slowing, conveying, or cleaning water (although pumps may be used for recycling water from lower to higher levels),
- (c) Where possible, the water system shall be integrated with the energy system, such as for storing or generating energy, and
- (d) Where possible, the water system shall be integrated with the agricultural system, irrigating plants and watering animals, using soils to store water or slow its flow, and using various plants and aquatic animals to clean water.

#### *18.7.10 Flood Risk Management*

Regenerative Villages may not be built on flood prone land, including up to the Probable Maximum Flood (PMF). This land has been excluded during the process of identifying appropriate localities as identified in the Potential Regenerative Villages map. Nevertheless, there may be circumstances where flood risk management shall be considered including:

- (a) Areas where a flood risk management study and plan has not been prepared,
- (b) Where the land is subject to overland flooding (i.e. local runoff, usually along gullies and feeding creeks or rivers), or
- (c) Where land is isolated during a flood event.

#### **Criteria**

- 1) In all circumstances, regenerative village developments shall consider the potential risk of flooding, taking into consideration the provisions of Chapter 8 – Flood & riverine Processes.

#### *18.7.11 Transport, Traffic and Parking*

#### **Criteria**

- 1) A transport plan shall be submitted with any proposal for a regenerative village. The plan shall consist of two complementary sections describing:
  - (a) Management of movement within the village, and
  - (b) Management of movement to and from the village by residents and visitors.
- 2) In determining the road design and parking requirements, the plan shall take the following matters into consideration:
  - (a) The development objectives in this chapter,
  - (b) The provisions of chapter 5 - Car Parking and Vehicular Access,

- (c) The additional provisions in section 2.6.7 Vehicular access of chapter 2 – Multiple Dwelling Construction,
- (d) Any schemes established for the sharing of vehicles amongst the residents in the village, and
- (e) Any reduction in the number of trips due to the provision of spaces for work, education, and entertainment close to housing and that are accessible within walking distance or via a shared, internal mobility systems.

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