

# E12 Penrith Health and Education Precinct

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## **Part D – Werrington Mixed-Use Area**

### **12.9 – Werrington Mixed-Use Area**

#### **12.9.1 Preliminary**

##### **12.9.1.1 Land to which this section applies**

The Werrington Mixed-Use Area covers land bounded by:

- The Main Western Railway Line to the north;
- The Great Western Highway to the south;
- French Street and existing residential development to the west and;
- The University of Western Sydney (North Campus) to the east.

This Section does not apply to land zoned B7 Business Park.

##### **12.9.1.2 Aims of this Section**

- a) To create an urban environment that optimises residential and employment opportunities that will act as a catalyst for future development for the area, and provides a mix of residential and employment generating land uses.
- b) To optimise employment opportunities on the site presented by its proximity to the Great Western Highway and the University of Western Sydney (UWS).
- c) To optimise the potential for use of public transport by residents, employees and visitors to the site.
- d) To provide a high degree of accessibility that is safe and direct both within the site and between the site and the surrounding residential areas and educational institutions.
- e) To provide a permeable and interconnected street system, with direct access denied to and from the Great Western Highway and a network of public thoroughfares (street and car parking areas), that accommodate the needs of vehicles, bicycles and pedestrians for efficient, convenient and safe access to all areas.
- f) To promote active and vibrant street frontages with a high degree of surveillance, particularly along prominent access routes, streets and or boulevards in both residential and employment areas.
- g) To ensure buildings have a high level of environmental performance consistent with Penrith City Council requirements, particularly with regard to energy efficiency, water management and the control of noise and emissions.
- h) To retain and protect areas of high conservation value and commemorate past uses of the site.
- i) To promote development that achieves best practice in ecologically sustainable development and enhances the natural values of the site.
- j) To require the consideration of social and economic aspects of sustainable development.
- k) To provide a public domain with a high aesthetic quality and appropriate landscaping.
- l) To require the preparation for a Concept Plan for each zone on the site and provide details on the information to be included in that plan.

## 12.9.2 Concept Plans

### 12.9.2.1 Requirements for a Concept Plan

Separate Concept Plans may be prepared for each of the zones. Concept Plans can be prepared, considered and adopted independently of one another, provided each demonstrates an appropriate integration and suitable interface between the zones and activities. Each Concept Plan must also demonstrate that development of the site will satisfy the requirements of this Section.

Council must not grant consent to development on land to which this plan applies unless:

- a) a Concept Plan covering the land to be developed has been prepared; and
- b) the development is consistent with the amended DCP;

except in the case where the Council has waived the requirement for a Concept Plan or where the development is exempt from the Concept Plan requirement. Where this occurs, Council will provide the applicant with written notice of the waiver or exemption. In the case of a waiver or exemption, Council must assess development with regard to the provisions of this DCP, and development applications must meet the requirements for Concept Plans as specified in this Section.

Council may waive the requirement for a Concept Plan at its discretion, or where:

- a) the development is of a minor nature and not inconsistent with the provisions of the LEP and this Section; or
- b) development is for a purpose listed in the Penrith LEP 2010.

A Concept Plan is to address, illustrate and explain the matters that the council determines are relevant to the future residential development of the land, and must include the following:

- a) urban design principles derived from analysis of the property and the character of its surroundings;
- b) conservation of cultural heritage and compatibility with the character of established neighbourhoods in Penrith City;
- c) conservation of natural features and biodiversity;
- d) protection of natural hazards, including flooding, bushfire and ground salinity;
- e) distribution of land uses and open space;
- f) provision of access for pedestrians, cyclists, road vehicles and public transport;
- g) controls for private landscapes and built form;
- h) safety and amenity of residential areas and the public domain;
- i) provision of on-site car parking;
- j) provision of service infrastructure;
- k) provision of public facilities;
- l) landscaping and improvements to the public domain;
- m) management of stormwater drainage and minimisation of water quality impacts;
- n) contribution to energy efficiency;
- o) staging of future development; and
- p) proposed patterns of subdivision.

### 12.9.2.2 Concept Plan Strategies

The Concept Plan(s) must include and be based on the following strategies, prepared for the uses proposed in the relevant zone:

- 1) A transport management plan for the site, which promotes the use of public transport and pedestrian activity and recognises the site's context and surrounds. This study shall include:
  - a) an assessment of the adequacy of the current French Street/Great Western Highway intersection to deal with the traffic volumes which will result from development of the site; and
  - b) development of any necessary traffic measures for O'Connell Street and Second Avenue to address the impacts of traffic interruptions due to greater pedestrian movements in the area.
- 2) An environmental management plan for the site, which promotes the enhancement and protection of the environmental qualities of watercourses, riparian land, remnant bushland and biological corridor linkages in accordance with best practice ecologically sustainable development.
- 3) An integrated economic strategy for the site, that promotes the optimisation of employment opportunities, particularly high technology developments.
- 4) A social plan for the site, which promotes the effective delivery of community facilities, services, and recreation opportunities and provides for community safety.
- 5) An implementation strategy to ensure that the provisions and measures proposed in the Concept Plan can be achieved.

### **12.9.2.3 Adoption of a Concept Plan**

Concept Plans are required to be adopted by Council. Council must not adopt a Concept Plan unless:

- a) The Concept Plan is consistent with the provisions and objectives of this Section and it addresses all matters outlined by this Section.

Council may consider a future application to amend an approved Concept Plan:

- a) Subject to the Penrith LEP 2010, and the provisions of this Section; and
- b) Submitted in the form of a development application or amendment to this Section.

Minor amendments only may be submitted in the form of a development application.

### **12.9.2.4 Form of a Concept Plan**

Concept Plans are to be adopted and will be assessed against the provisions of this Section. Accordingly, it is important that the information is presented in a form that can be easily checked against and assimilated into the structure of this Section.

Concept Plans shall describe details of the design, implementation and management of future development. Those details shall be consistent with the provisions and the sections in this DCP, being:

- a) Urban Design;
- b) Sustainability;
- c) Site Features;
- d) Infrastructure Services; and
- e) The relevant zones.

This Section specifies the information to be provided in the Concept Plan and the provisions that must be complied with. A table will be required to be submitted with the Concept Plan

which lists each requirement contained in this plan and indicates where it is addressed in the Concept Plan. If any provision is considered not relevant to a Concept Plan, the table must indicate why it is not relevant and how the principles covered by the provision will be met (e.g. in a different Concept Plan, at Development Application stage etc.).

Concept Plans must include clear strategies for implementation and monitoring.

The use of tables, diagrams, and maps is encouraged to ensure information is clearly conveyed.

## **12.9.3 Urban Design**

### **12.9.3.1 Land use and Activities**

#### **A. Objective**

- a) To ensure that the land uses and activities proposed in each zone comply with the provisions of the relevant planning instruments, and that any negative impacts arising from these activities are minimised.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) a scaled map of the site demonstrating that the R1 General Residential zone has a minimum area of 6ha;
- 2) pictorial depiction of the division of each zone into specified activities, generally in accordance with the proposed land use layout shown in Map 1;
- 3) the nature of specified activities, with reference to likely environmental effects, including (where relevant) information on:
  - a) resident population and number of employees;
  - b) hours of operation;
  - c) likely visitation;
  - d) traffic generation; and
  - e) noise generation.
- 4) compatibility of each activity with neighbouring activities, both on this site and on neighbouring properties;
- 5) measures to achieve an appropriate interface between adjacent precincts and land uses, both on this site and on neighbouring land, including boundaries, buffers and gateways;
- 6) visibility and accessibility of business / retail floor-space; and
- 7) important heritage values identified by any relevant heritage studies.

### **12.9.3.2 Pattern of Streets, Open Spaces and Community Facilities**

#### **A. Objective**

- a) To ensure that the design of public areas, including streets, open space and community facilities, considers the needs of future residents and visitors in terms of accessibility, pedestrian movement, public transport use, safety and amenity.

## **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) details of access networks for vehicles, pedestrians and cyclists which are appropriate and effective, and cater for likely pedestrian routes around and through the site, including between the station and the UWS and TAFE campuses;
- 2) provision of a hierarchical structure of open spaces and meeting places;
- 3) provision of a 'central park' which provides meaningful passive and active recreation opportunities;
- 4) walking distances to key destinations, including UWS and TAFE;
- 5) bus routes, bus and taxi set-downs;
- 6) road-safety elements requiring detailed design treatment;
- 7) vistas to key landmarks or features within the future development and beyond;
- 8) interpretation and / or commemoration of particular items of historic or heritage significance;
- 9) location of open spaces and community facilities, and the basis for this;
- 10) any options presented by the site for innovative approaches to the implementation, ownership and management of required "public" infrastructure; and
- 11) a draft management plan prepared in accordance with the Local Government Act for all open space which is proposed to be dedicated to Council.

### **12.9.3.3 Pattern of Street-Blocks and Subdivision**

#### **A. Objectives**

- a) To ensure residential density standards can be met.
- b) To ensure design and layout of the site considers principles of ESD, safety and amenity.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Overall dimensions and net area of each street block;
- 2) The climatic orientation of each block, optimising winter solar access;
- 3) Compatibility with accepted principles of planning for safety;
- 4) The identification and reinforcement of significant vistas; and
- 5) Reinforcement of the gateways to the site, in particular at principal road intersections.

### **12.9.3.4 Pattern of Built Form and Landscaped Areas**

#### **A. Objectives**

- a) To ensure Concept Plans provide sufficient detailed information on proposed uses of the site to allow Council, the community and other stakeholders to develop an accurate picture of the site's future.
- b) To ensure relevant aspects of urban design are considered in planning the design and layout of the site.

## **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Indicative range of building types;
- 2) Indicative building envelopes expressed in terms of:
  - a) footprint;
  - b) height and rise in storeys;
  - c) overall frontage to the street;
  - d) orientation;
  - e) setbacks;
  - f) articulation and variation of forms;
  - g) articulation and variation of garden areas;
  - h) private open space provision;
- 3) Projections of residential population and / or employment floor space;
- 4) Car parking shall be:
  - a) provided in accordance with the Parking section of this DCP for residential development unless otherwise indicated in the Infrastructure Services part of this Section;
  - b) located appropriately for residents, employees, visitors and/or loading and unloading.
- 5) Landscaping strategy, in accordance with the proposed open space network shown in Figure 12.31 and the provisions of this plan; and
- 6) Recommendations for location, orientation and detailed design of dwellings, buildings, private and public open space that are necessary to meet the solar access provisions of this plan.

### **12.9.3.5 Public Domain**

#### **A. Objective**

- a) To ensure that the safety, functionality, and amenity of the public domain is considered in the design and layout of the site.

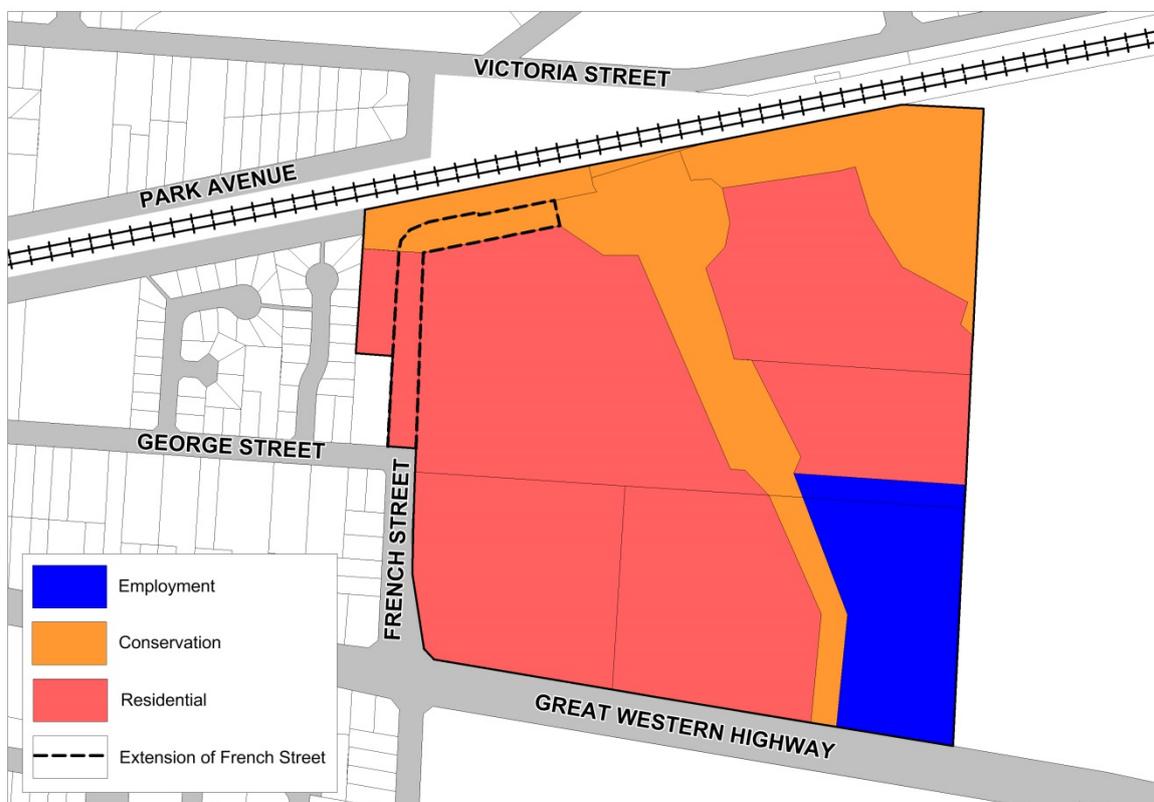
#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Location of each activity relative to the public domain;
- 2) Location of on-site parking relative to the public domain and neighbouring occupancies;
- 3) Measures to maximise public domain safety, including accepted Crime Prevention Through Environmental Design (CPTED) principles;
- 4) Integrated design of landscapes and buildings;
- 5) Design responses to the character of surrounding development and heritage items;
- 6) Design responses to achieve an individual character for each precinct;

- 7) Planning and design principles that achieve architectural variation within each street block, particularly with regard to the shape and style of facades and the selection of materials;
- 8) Planning and design principles for landscaping of private areas and the public domain, including:
  - a) vegetation,
  - b) paving,
  - c) lighting,
  - d) signage; and
  - e) street furniture.

**Figure 12.30: Map 1 – Proposed Land Use Layout**



**Figure 12.31: Map 2 – Proposed Open Space Layout**



## 12.9.4 Sustainability

Sustainability generally refers to the protection of ecosystems and biodiversity for the benefit of current and future generations as well as in terms of social and economic issues, so that it encapsulates all aspects of community life and wellbeing. This ‘triple bottom-line’ of environmental, social and economic considerations must be considered together if our community is to achieve true sustainability.

Given its location and nature, the Werrington Mixed-Use site presents a unique opportunity to achieve a development with a higher level of sustainability than is generally achieved in Penrith. The implementation of Environmentally Sustainable Development principles is a fundamental tenet for development within the Werrington site. The provisions of this Section of this DCP are designed to maximise this opportunity.

### 12.9.4.1 Social and Economic

#### A. Objectives

- a) To ensure that plans for development of the site consider social implications for both future occupants and surrounding residents, and
- b) To optimise the economic contribution development of the site can make, given its location and relationship with surrounding uses, particularly the University of Western Sydney.

#### B. Controls

The following elements are required to be incorporated in a Concept Plan:

- 1) Demonstrate that the social needs of future occupants of the site have been considered in the context of the overall development, with particular reference to the social plan required by Concept Plan Strategies of this Part.

- 2) The initiatives developed in the economic plan required under Concept Plan Strategies of this Part are to be incorporated into the overall development plan for the site.

### **12.9.4.2 Biodiversity: Flora and Fauna**

Indigenous vegetation and habitat on the site has been substantially modified by past use. Despite this, remnant native vegetation on the site provides biodiversity and habitat value and should be preserved, including vegetation which has been identified as Cumberland Plain Woodland.

Cumberland Plain Woodland is an endangered ecological community and occurs within the subject lands. The Cumberland Plain Woodland should be viewed as an ecological constraint to development of the site and must be retained and protected. There are additional small pockets of woodland in the south-western part of the site. When designing the layout of the employment area, consideration should be given to preserving these stands and protecting their long-term viability.

#### **A. Objectives**

- a) To conserve wildlife habitat and indigenous plant species;
- b) To ensure that development adjacent to areas of existing vegetation identified for preservation is designed to minimise impact; and
- c) To retain indigenous vegetation and wildlife habitat and ensure appropriate buffer zone edge treatment between any development and any adjacent Cumberland Plain Woodland.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Demonstrate what measures will be taken to enhance the biodiversity and habitat value of the site.
- 2) Identify those parts of the site that should not be disturbed and detail strategies to ensure they are protected;
- 3) Include a rehabilitation plan which details measures and strategies for protecting the long-term viability of remnant Cumberland Plain Woodland;
- 4) Identify and demonstrate appropriate edge treatments, including buffer zones, to minimise the impact of development on the Cumberland Plain Woodland present on the site;
- 5) Include a biodiversity strategy for the site which:
  - a) Preserves mature trees within public reserves;
  - b) Preserves the mature stand of trees in the footpath reserves, building setbacks and on-site car parking areas;
  - c) Expands available habitat into corridors or blocks of appropriate configuration;
  - d) Employs predominantly indigenous plant species in site landscaping themes;
- 6) Minimise the number of separate vehicular and pedestrian crossings of the riparian corridor.
- 7) Good quality, durable physical barriers shall be installed (complying with a National Parks and Wildlife Service specification) to prevent vehicular access and discourage pedestrian access into woodland areas;

- 8) Development practices for the site shall provide for the storage and reuse of excavated soils that are not affected by chemical or other contamination, to promote growth of indigenous species; and
- 9) A Management Plan for all native vegetation on the site outlining the ongoing measures needed to properly manage areas required to be conserved.

### **12.9.4.3 Water Cycle**

The Werrington Mixed-Use site drains to South Creek. Studies by the Environment Protection Authority (EPA) and Sydney Water have demonstrated that the water quality in South Creek is significantly impacted by urban runoff. Minimising the pollution contained in urban runoff from this site will have a beneficial impact on the water quality in South Creek and ultimately the Hawkesbury River.

#### **A. Objectives**

- a) To achieve an integrated approach to water cycle management on the site;
- b) To control the quantity and quality of runoff from the site to maximise the improvements to downstream receiving waters and minimise the impact on the downstream catchment;
- c) To investigate innovative approaches to water supply to minimise water wastage and reduce the demand for potable water; and
- d) To maximise the ecological, visual and recreational benefits gained from the riparian corridor.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Demonstration that future development will not generate undesirable environmental impacts on receiving waters;
- 2) Identification and incorporation of best management practices to control runoff quantity and quality from the site;
- 3) Provision of information on existing salinity levels on site, including soil and ground water testing, and indicates measures to be taken to ensure that development does not adversely impact on those levels;
- 4) Provision of a stormwater management plan which demonstrates conformity with the EPA guidelines – Managing Urban Stormwater and Penrith City Council applicable development guidelines and the Storm Water Management Plans for South Creek; and
- 5) Incorporation of sufficient runoff detention on the site to ensure peak flow rates do not exceed existing rates for all storm events.
- 6) Adoption of an integrated approach to the management of wastewater, which is consistent with:
  - a) the objectives for a medium-density development incorporating water-sensitive urban design practices;
  - b) capacity of site soils to absorb run-off;
  - c) existing levels of soil salinity;
  - d) the scale and desired density of future development, and the associated cost-benefits of dual supply for irrigation of open spaces and gardens;
  - e) local climate and likely rates of evaporation from open ponds;

- f) potential cost-benefits associated with nutrient polishing for stormwater and treated sewage effluent.
- 7) A surface drainage design shall be prepared, which is designed:
- a) includes any runoff detention and water quality control ponds, swales and channels;
  - b) minimises land-take, consistent with the desired character of future development while still incorporating all major trees and riparian vegetation;
  - c) takes the form of a naturalistic channel with water on the surface;
  - d) limits disturbance to the ground whenever possible;
  - e) utilises landscaped, open space and passive recreational features;
  - f) ensures engineered structures are integrated with the configuration and character of the wider development and its public domain; and
  - g) incorporates ecological habitats in a riparian corridor.
- 8) Requirements for development proposals for the site to evaluate opportunities for the integration of water supply and re-use of stormwater, Greywater and treated effluent:
- a) in consultation with authorities such as Sydney Water, NSW EPA, NSW Department of Health, and Penrith City Council;
  - b) A thorough investigation of opportunities for the reuse on-site of Greywater and treated effluent and recycled stormwater, noting:
    - i) rainfall patterns and the assimilative capacity of the site's soils;
    - ii) landscaped areas available for irrigation with treated effluent;
    - iii) impacts of irrigation on existing soil salinity; and
    - iv) cost and feasibility of dual supply and storage of treated effluent for non-potable purposes.
- 9) Requirement for development proposals for the site to investigate and employ a package of measures that effectively reduces demand for potable water through re-use, including:
- a) dual potable and non-potable supplies; and / or
  - b) appropriate landscape design and selection of species; and / or
  - c) rain-water tanks; and / or
  - d) use of site stormwater; and / or
  - e) the use of AAA rated plumbing fittings and appliances, including shower heads, water tap outlets, toilet cisterns, dishwashers and washing machines. Plumbing fittings shall achieve the following standards:
    - i) shower heads – 9 litres or less per minute,
    - ii) water tap outlets – 9 litres or less per minute,
    - iii) toilet cisterns – 6/3 litre dual flush or equivalent, and
    - iv) separate hot and cold taps in basins and sinks.

#### **12.9.4.4 Air Quality**

##### **A. Objectives**

- a) To ensure that development does not have an undue adverse effect on air quality; and

- b) To identify appropriate compensatory measures that can be taken to help improve air quality in general.

### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Stationary pollution sources are to comply with EPA licensing standards;
- 2) Prohibition of the use of solid fuel heaters on the site;
- 3) Identification and promotion of the use of compensatory measures such as the provision of green corridors; and
- 4) Optimisation of the proportion of the site available for soft landscaping.

## **12.9.5 Public Transport**

### **A. Objectives**

- a) To reduce the demand for use of private motor vehicles and maximise the use of public transport through integrated planning of land uses and transportation, and
- b) To provide a dense and interconnected mixture of land uses which include residential, recreational, employment, retail and business services.

### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) The principles developed in the transport management plan required by Concept Plan Strategies of this Part have been incorporated into the overall development of the site; and
- 2) A safe and convenient pedestrian network formed by a closely spaced grid of streets interconnected with public open spaces.

## **12.9.6 Site Features**

### **12.9.6.1 Topography and Soils**

#### **A. Objective**

- a) To protect the site's landscape character, and minimise any environmental effects likely to arise from future development.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Information is to be provided on the soil characteristics of the site and surrounding areas, including salinity and erodability;
- 2) Concept Plans shall demonstrate how this information has been considered in site planning;
- 3) The development layout of the site shall minimise the need for reconfiguration of existing topography, particularly in areas surrounding any mature trees which are to be preserved and in the vicinity of identified Aboriginal sites and artefacts.

## 12.9.7 Infrastructure Services

### 12.9.7.1 Street Networks

The network and design of streets has a fundamental influence upon the form and character of development, and the environmental amenity of neighbourhoods. Streets have several roles. They provide:

- a) safe and convenient access for pedestrians and cyclists;
- b) effective distribution and circulation of vehicles;
- c) visitor parking;
- d) routes for reticulated services;
- e) boundaries and separation between dissimilar land uses;
- f) landscaped corridors which contribute to the character of neighbourhoods and overall townscape;
- g) view corridors and vistas to landmarks within the site and beyond;
- h) a public address for dwellings, commercial and employment activities;
- i) establish an appropriate solar orientation for allotments and dwellings;
- j) routing for trunk services; and
- k) overland drainage paths.

#### A. Objectives

Design a street network that:

- a) is appropriate to environmental design objectives;
- b) is economically efficient;
- c) generates a distinctive character; and
- d) provides high standards of amenity.

#### B. Controls

The following elements are required to be incorporated in a Concept Plan:

- 1) The road network shall be designed to accommodate multiple purposes, including:
  - a) safe and efficient access for pedestrians (including alternative forms of pedestrian activity), cyclists and vehicles;
  - b) underground routing of service infrastructure;
  - c) contribution to traditional townscape character;
  - d) provision of vistas to landmarks within the site and beyond;
  - e) establishment of appropriate solar access for allotments, open spaces, buildings and dwellings; and
  - f) alternative means of emergency access, for example: during flood events.

### **12.9.7.2 Principal and Secondary Site Roads**

The site is situated on the edge of established residential suburbs, with frontages to a main road and the University site. An initial assessment of traffic impacts supports the following configuration for this site's major roads:

- a) hierarchical network which separates residential and employment traffic;
- b) major entrance from French Street.

#### **A. Objectives**

- a) To consider multiple objectives for roads including access and circulation, the character of townscape and market appeal of future development; and
- b) To provide safe and effective access to individual properties, contribute to a distinctive neighbourhood character and provide high standards of amenity.

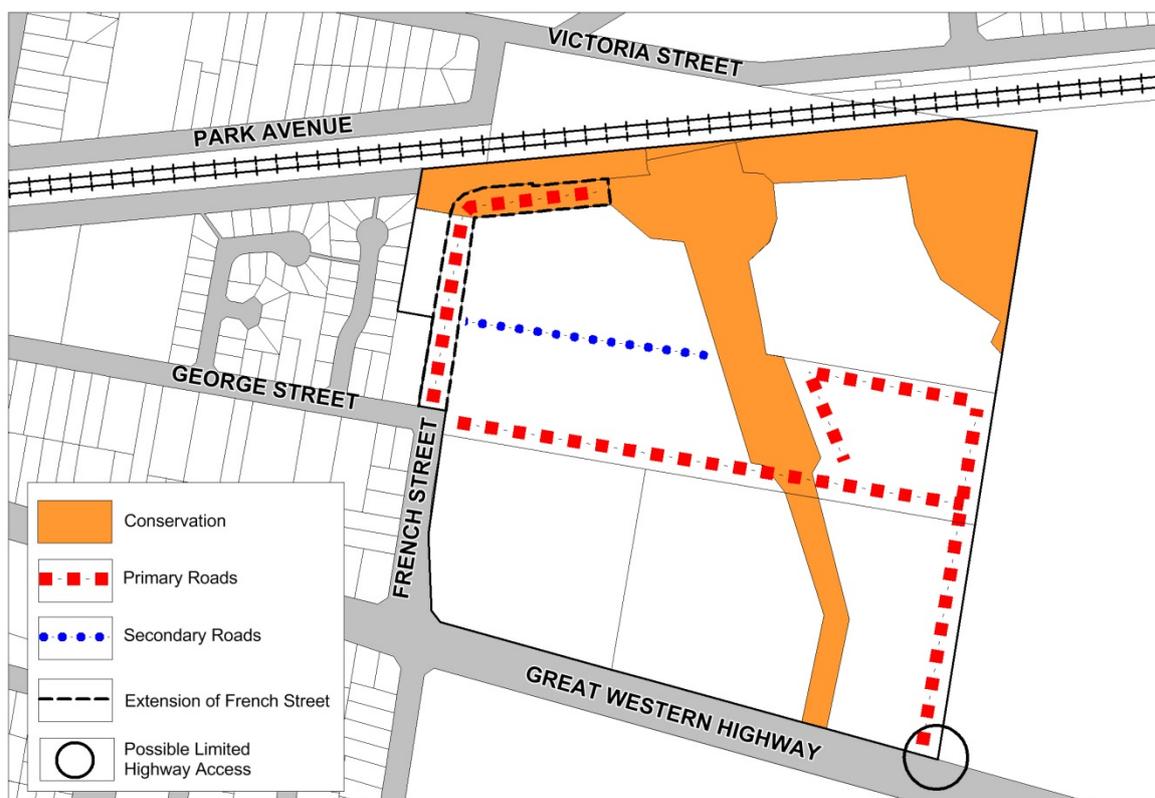
#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) The design and layout of principle and secondary site roads shall:
  - a) be in accordance with relevant Council policy and design standards and be based on forecast traffic flows;
  - b) provide efficient access and circulation for buses and taxis;
  - c) facilitate a configuration of neighbourhood streets appropriate to the desired solar orientation of dwellings;
  - d) provide safe pedestrian access, and vistas towards landmarks and central destinations within the site and beyond; and
  - e) limit the number of four-way intersections and where they occur, indicate their management.
- 2) The configuration of principal roads shall:
  - a) not adversely affect traffic flows along existing arterial and main roads;
  - b) interconnect the residential and employment areas;
  - c) provide for a tightly-spaced grid of secondary streets, designed according to principles of traditional neighbourhood design; and
  - d) provide high-exposure business addresses.
- 3) Principle roads shall be designed:
  - a) to provide adequate capacity to cater for expected traffic flows;
  - b) according to principles of traditional neighbourhood design;
  - c) to control traffic speeds, incorporating safe pedestrian crossings to central destinations;
  - d) as tree-lined thoroughfares which contribute to the overall character of townscape;
  - e) to accommodate kerbside parking for visitors in the residential area and the employment area; and
  - f) to provide access to the Mixed-use employment zone separated from the Mixed-use residential zone.
- 4) The configuration of secondary roads shall:

- a) discourage peak movements of through traffic;
  - b) discourage employment-area traffic from entering residential precincts; and
  - c) distribute local traffic efficiently and effectively without congestion at intersections.
- 5) Secondary roads shall be designed to:
- a) provide a distinctive landscaped address and character for each precinct;
  - b) to facilitate safe and effective circulation, parking and unloading for transport vehicles within employment precincts;
  - c) optimise on-street parking within residential precincts; and
  - d) incorporate designated pedestrian footpaths, dimensioned and finished to service each precinct according to its desired function and character.

**Figure 12.32: Proposed Road Network**



### 12.9.7.3 Pedestrian and Cycle Access

#### A. Objective

- a) To provide safe and effective pedestrian and cycle access to key destinations.

#### B. Controls

The following elements are required to be incorporated in a Concept Plan:

- 1) Effective and convenient pedestrian and cycle access along streets, through public parks and drainage reserves, demonstrating that the pedestrian/cycle network has been linked to:
  - a) key destinations on-site:
    - i) the future village centre;
    - ii) residential precincts and employment areas; and
    - iii) community facilities, open spaces and meeting points;
  - b) destinations surrounding the site that have regional, city or district significance, including the UWS and TAFE College.

**Figure 12.33: Pedestrian, Cycle Routes and Bus Routes**



### 12.9.7.4 Energy Supplies

#### A. Objective

- a) To ensure that the site is adequately supplied with energy.

#### B. Controls

The following elements are required to be incorporated in a Concept Plan:

- 1) Council is to be supplied with appropriate evidence demonstrating that the site can be adequately serviced.

- 2) Prior to the submission of an application for development of the site, the owner / applicant shall negotiate the planning and design of services with relevant gas and electricity service providers.
- 3) All new services shall be located underground

### **12.9.7.5 Community Services and Recreation**

#### **A. Objective**

- a) Determine the range of services required and opportunities for public recreation and community use, consistent with the desired character of development and population projections.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Confirmation of the likely population and social profile of the site's future residents;
- 2) Identification of the range of needs, which may be reasonably attributed to the projected population;
- 3) Identification of innovative means by which these needs can be met, possibly including shared facilities and/or joint ventures;
- 4) A balanced provision of facilities to meet projected needs, having regard to existing facilities within the area;
- 5) An appropriate location, configuration and design for facilities which meets the needs of users and minimises the costs operation and maintenance; and
- 6) Demonstration that local and district needs will be met in accordance with Council's social planning framework.

### **12.9.7.6 Landscape Design**

Effective landscape design is fundamental to traditional neighbourhood design, and makes a significant contribution to the implementation of Ecologically Sustainable Development objectives.

#### **A. Objective**

- a) To integrate the planning and design of buildings with the site's landscaping.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Landscapes shall be designed to achieve the environmental, recreational, amenity and townscape objectives of this Section and the Landscape Design Section.
- 2) Design of landscapes shall minimise need for water and nutrients;
- 3) Mature vegetation that has habitat, civic or heritage values shall be conserved;
- 4) Plant species to be in accordance with the Landscape Design Section and the Flora & Fauna study for the site;
- 5) Paving material, lighting, signage and street furniture shall be in accordance with Council guidelines;

- 6) Existing habitat shall be expanded with new plantings configured to provide continuous corridors;
- 7) The design of public streets and parks shall:
  - a) facilitate multiple uses;
  - b) be consistent with Council's current management policies and practices;
  - c) ensure that landmark locations, key thoroughfares and vistas are complemented and reinforced;
  - d) ensure that the public domain is embellished to compensate for smaller residential gardens;
  - e) ensure that drainage reserves are embellished as attractive components within the public domain, as effective adjuncts to wastewater management and as habitat for bird life;
  - f) provide for the identification of individual neighbourhoods and precincts; and
  - g) incorporate appropriate street tree planting.
- 8) Landscape design strategies shall be prepared for each residential neighbourhood and employment precinct; and
- 9) Shelter and shade should be provided for buildings and open spaces, moderating the site's natural microclimate.

## **12.9.8 Residential Development**

### **A. Objectives**

- a) To create a residential environment that is considered vibrant, aesthetically pleasing and safe for residents and visitors;
- b) To provide a safe and competent pedestrian and transport network that links people with activities and places in an efficient manner;
- c) To provide for a range of housing types that should include an affordable housing component;
- d) To integrate with recreational, community and educational facilities;
- e) To provide retail and commercial activities that are not in direct competition with locally based firms; and
- f) To conserve areas of biological diversity, which have heritage significance or are environmentally sensitive.

### **12.9.8.1 Residential Density**

#### **A. Objectives**

- a) To provide for a range of residential densities and housing choice.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) A minimum average net density of 30 dwellings per hectare is to be achieved in the R1 General Residential zone. Such density is to be achieved with a mix of housing types, including:

- a) Two storey townhouses; and
- b) Small lot housing.

### **12.9.8.2 Residential Amenity**

#### **A. Objectives**

- a) To achieve a high standard of residential and environmental amenity.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) A high standard of amenity appropriate to a medium density and mixed-use environment is to be achieved. This shall include measures to:
  - a) reduce or eliminate potential conflicts between different neighbouring land uses;
  - b) protect visual privacy for dwellings and private open spaces consistent with the Residential Development Section;
  - c) Provide appropriate new communal spaces within the neighbourhoods and the village centre to allow for social interaction of residents.
- 2) Submission of a noise and vibration assessment for any residential development located within 100m of a major arterial road, Transitway environment or rail corridor or in any other area significantly affected by road and/or rail noise and vibration, and appropriate measures to minimise this impact in areas that are significantly affected by noise and vibration.
- 3) Internal noise levels shall accord with EPA noise criteria including:
  - a) Environmental Criteria for Road Traffic Noise, 1 July 2011, Environment Protection Authority;
  - b) Interim Guidelines for Development Near Rail Corridors and Busy Roads, 2008, Department of Planning; and
  - c) NSW Industrial Noise Policy, December 1999, Environment Protection Authority.
- 4) Internal noise levels shall accord with the Noise and Vibration Section;
- 5) Site planning and building design shall consider and address noise mitigation for areas close to significant noise sources including:
  - a) residential development adjoining French Street and the new east/west road link;
  - b) residential development adjoining employment developments; and
  - c) residential development adjoining the railway line.

### **12.9.8.3 Crime Prevention and Community Safety**

#### **A. Objective**

- a) To ensure the design of all public areas limits opportunities for crime.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Compliance with the CPTED principles within the Site Planning and Design Principles Section;

- 2) Protection of public spaces shall be demonstrated by:
  - a) designing for high levels of casual surveillance;
  - b) use of effective lighting type and location;
  - c) thoughtful placement of garden areas, trees, street furniture, walling and other structures;
  - d) clear delineation between public and private areas;
  - e) ensuring there are clear sight lines;
  - f) elimination of entrapment and isolated spots;
  - g) provision of safe children's play areas;
  - h) provision of clear signage;
  - i) siting and design of buildings with graffiti management in mind; and
  - j) provision for ongoing maintenance and management strategies that will provide a high level of visual amenity.
- 3) Dwelling security to be demonstrated by ensuring:
  - a) dwellings are designed to have a clear presentation to the street; and
  - b) dwelling entrances being designed to allow the occupant to view persons at the front door without needing to open the door.

#### **12.9.8.4 Population and Housing**

##### **A. Objective**

- a) To encourage diversification in housing to meet underlying demand from Penrith's existing population.

##### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Demonstration that the development pattern proposed for the site provides housing choice which:
  - a) meets identifiable demand from Penrith's population;
  - b) expands the range of available housing types;
  - c) is within an environmental setting which offers a village lifestyle; and
  - d) complies with the provisions of the Residential Development Section of this DCP.

#### **12.9.8.5 Home-Based Business Activities**

##### **A. Objective**

- a) To maximise opportunities for residents to establish and operate small-scale business activities from home.

##### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Site planning, housing designs and other physical measures to be included to support home-based business activities, including:
  - a) dedicated rooms for business activities;
  - b) separate entrances for the residences and for business rooms;
  - c) flexible parking and vehicle access for visitors and / or residents – subject to the scale of activity;
  - d) buildings designed according to traditional residential scale and appearance when viewed from the street; and
  - e) 'smart wiring' of homes to enable consumers to access multi telecommunications facilities (internet, e-commerce, cable TV, lighting, audio, security).

### **12.9.8.6 Retail and Business Services**

#### **A. Objective**

Provide retail floorspace in the village centre that services the day-to-day needs of local residents and businesses.

#### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Sufficient retail floorspace shall be provided to meet projected local demand of:
  - a) future residents; and
  - b) future businesses.
- 2) The location and design of retail floorspace shall support the desired form and character of the future development:
  - a) in a consolidated form to provide a core of pedestrian activity within the village centre;
  - b) in a location which is central, highly visible and accessible, fronting a principal site road;
  - c) incorporating a civic open space;
  - d) with continuous "active" shop-frontages and all-weather awnings facing wide, tree-lined footpaths;
  - e) with short-term parking at kerbside for visitors and shoppers;
  - f) within buildings designed to preserve a human scale at street-level; and
  - g) retail and commercial facilities are restricted to the ground floor level of buildings only.
- 3) Small-scale retail-type services shall be accommodated on the site:
  - a) in response to demand from local home businesses and other business activities;
  - b) in prominent locations; and
  - c) designed to maximise visibility and accessibility, and to provide distinctive urban design elements.

## **12.9.8.7 Parking**

### **A. Objectives**

- a) To ensure a level of parking provision consistent with the density and form of housing provided; and
- b) To limit parking numbers as a tool to increase the use of public transport.

### **B. Controls**

The following elements are required to be incorporated in a Concept Plan:

- 1) Applications for residential development shall demonstrate compliance with the relevant parking rates in and the Car Parking section of this DCP.
- 2) A reduction in required parking provision may be considered by Council for any dedicated student housing within the development where a lesser demand is demonstrated.