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C13 Infrastructure and Services

A. Background

This Section seeks to address a number of issues relating to the provision of infrastructure and services, and the design and construction of engineering works. These issues relate to all development. However, the issues are particularly important in areas where there is limited access to infrastructure or services/utilities such as in rural areas or new release areas.

B. General Objectives

- a) To ensure existing infrastructure and services, including easements, are taken into account in siting and designing any proposed development;
- b) To ensure there is adequate provision of utilities and services to allotments to support any proposed development without significant additional burden on Council and utility providers;
- c) To ensure on-site sewage management systems in the City's unsewered areas are sited, designed, constructed, operated and maintained to prevent risks to public health and the environment;
- d) To achieve set engineering and construction standards for infrastructure, which is provided either by Council or a private developer; and
- e) To ensure social facilities are provided in a manner appropriate to the proposed development.

C. Other Relevant Sections of this DCP

Penrith DCP 2014 is a multi-layered document that recognises the relationship of a number of issues to achieving sustainable outcomes. Therefore, in order to address infrastructure and services, it is important to read all relevant sections of this DCP.

13.1. Location of Easements for Infrastructure

A. Background

A number of properties within the City of Penrith are encumbered with major infrastructure that may affect the potential development opportunities for the site.

B. Objectives

The objective of this section is to ensure existing infrastructure and services, including easements, are taken into account in siting and designing any proposed development, and relevant service authorities are consulted.

C. Controls

- 1) Applicants should identify the type and location of infrastructure (including the easement) that is on the site and consult with the relevant service authority to determine whether the easement will be a constraint to development of the site.
- 2) Applicants should consider the likely impacts of locating adjacent to or on an easement and the likely land uses/activities proposed on the site. Buildings (including swimming pools) or the storage of flammable or explosive materials or flammable liquid carriers must not be located within easements.
- 3) Proposals that encroach into the easement will require the approval of the relevant service authority. It is recommended that applicants consult with the relevant service authority as part of the initial stages of the development concept.

13.2. Utilities and Service Provision

A. Background

An integral part of determining whether certain land uses are suitable for a site involves assessing whether the appropriate utilities and services are available on the site to service the proposed development, and whether they have sufficient capacity to meet the demand of the proposal (and any future increase in demand) in the area.

This issue is particularly relevant in rural areas and in new release areas where services may not exist. Even in urban areas, existing services may not be capable of meeting further demands placed by new development.

This section aims to ensure that development consent is only granted where a proposal can be appropriately serviced, either through the existing system having sufficient capacity or being upgraded, or an alternative system being provided. In most cases, the developer will be required to fund necessary system upgrades or alternatives.

B. Objectives

- a) To ensure that development will not place unreasonable pressure on servicing authorities in terms of timing and extent of supply;
- b) To ensure that development will take place only where satisfactory arrangements are made with the servicing authorities; and
- c) To ensure that adequate consultation is carried out with the relevant servicing authorities during the formulation of development proposals.

C. Controls

1) General

- a) Any site analysis (see the Site Planning and Design Principles Section) should address the existing and proposed provision of services/utilities to a property and whether there is satisfactory capacity to address the required demand of the proposal.
- b) Satisfactory arrangements should be made with the servicing authorities for the provision of services to the property.
- c) Where possible, services (including easements) should not be located in areas where vegetation will be removed or damaged.

2) Infrastructure Delivery Plan for New Release Areas

- a) The preparation and submission of an *Infrastructure Delivery Plan* (IDP) is required for all new release areas. The IDP is required to identify all infrastructure, including civil works, utility services and community, social, cultural and recreational facilities, to service a new release area and establish a framework for its timely provision.
- b) The IDP should include associated costing (including on-going operating and maintenance costs) and estimated delivery timeframes for all infrastructure, with a commitment to providing services up front where they are required early in the life of new estates. Where possible, the IDP should demonstrate efficient use and/or extension of existing infrastructure. The IDP should explore opportunities for the delivery of innovative and sustainable infrastructure, services, facilities and networks with adherence to the principles of social justice, equity and accessibility.
- c) The IDP shall provide an accurate costing for all infrastructure to be provided and a delivery program with key pre-planning design and construction phases identified. It shall also incorporate relevant apportionment of costs where it is agreed those will be shared with other providers. The IDP will form the basis for the development of Section 94 Contributions Plans and/or Development Agreements, as well as agreements required to be entered into with the State Government and its agencies for the delivery of regional based facilities.
- d) For further details on what should be addressed in the IDP, see Appendix F3 – DA Submission Requirements.

3) Water

- a) Sydney Water should be contacted regarding its requirements in conjunction with discussions with Council about development, subdivision and building applications.
- b) For some developments, it will be necessary to provide evidence to Council that consultation has been carried out when building and development applications are submitted. For most developments, provision of evidence that consultation with Sydney Water has been carried out will be a condition of consent. Please discuss this with Council's Development Services Department.
- c) Council is unlikely to grant consent to applications for developments which place unreasonable pressure on Sydney Water's supply capacity.
- d) It will generally be the applicant's responsibility to pay for or construct any increase in capacity of services.

4) Electricity

- a) Applicants are required to make satisfactory arrangements with Endeavour Energy for the provision of electricity and/or lighting to the site.

5) Telecommunications

Applicants are required to make satisfactory arrangements with Telstra for the provision of telephone and data cables.

Telecommunication infrastructure in new release areas should provide the following:

- a) Multiple telecommunication services including high speed internet (including broadband), voice and data systems;
- b) Cabling for all telephone lines, cable TV and internet, built into all buildings from the outset;
- c) Underground telecommunications infrastructure; and
- d) Consideration of the provision of a centralised (C.A.T.V) system rather than individual antennae or dishes particularly for multi dwelling housing and residential flat buildings.

6) Gas

Natural gas supplies are not available to many parts of Penrith's rural areas. Applicants are advised to discuss the provision of gas supplies with AGL Energy or the local gas delivery company.

13.3. On Site Sewage Management

A. Background

On-Site Sewage Management Systems (OSSM system)

The City of Penrith consists of both sewerred and unsewerred areas. The main systems used in unsewerred areas are aerated wastewater treatment systems (AWTS), pump-out systems and absorption trench disposal systems.

Issues with OSSM systems

The predominant soil landscape groupings in Penrith are Wianamatta group shales and clays. These soil types characteristically have poor permeability due to their clay content. In many cases, effluent from failing OSSM systems diffuses into the surrounding environment rather than being adequately treated by the system through absorption, evaporation and plant uptake. Improved regulation, operation and maintenance of OSSM systems can address these issues. This section has been developed to help applicants assess the selection, design, installation, operation and maintenance of domestic OSSM systems and draws from Council's 'On-site Sewage Management and Greywater Reuse Policy'.

This section applies to development proposals involving new domestic OSSM systems or changes to existing domestic OSSM systems on unsewerred land in the City of Penrith. It includes requirements for subdivision and development proposals that intend to rely on OSSM systems.

B. Objectives

- a) To guide applicants and landholders towards sustainable on-site management of sewage and waste water;
- b) To protect and enhance the quality of public health and the environment within the Penrith LGA.
- c) To assist Council to prioritise resources for the efficient regulation and monitoring of OSSM systems within the City.
- d) To prevent risk to public health – wastewater may contain bacteria, viruses, parasites and other disease-causing organisms. OSSM systems should be selected, sited, designed,

constructed, operated and maintained so that contact with effluent is minimised or eliminated, particularly for children; residuals, such as composted material, are handled carefully; and treated sewage is not used on edible crops that are consumed raw.

- e) To protect land and vegetation – OSSM systems should not cause the deterioration of land and vegetation quality through soil structure degradation, salinisation, water logging, chemical contamination or soil erosion;
- f) To protect surface and ground waters – OSSM systems should not contaminate surface and ground waters as a result of flows from treatment systems and land application areas;
- g) To conserve and reuse resources - the resources in domestic wastewater (including nutrients, organic matter and water) should be utilised as much as possible within the bounds posed by the other performance objectives; and
- h) To protect community amenity – OSSM systems should not unreasonably interfere with the quality of life and, where possible, should add to local amenity.

These objectives reflect the objectives of Council's On-site Sewage Management and Greywater Reuse Policy.

C. Controls

1. New OSSM Systems

- a) Approvals are required for the installation and operation of all new OSSM systems. Installation and operational approvals will initially be assessed together.
- b) The installation and operation of OSSM systems are to be in accordance with Council's On-Site Sewage Management and Greywater Reuse Policy.
- c) A Wastewater Assessment Report is required to be submitted with an application for the installation of a new domestic OSSM system when the criteria of Council's On-Site Sewage Management and Greywater Reuse Policy have been met.
- d) A Wastewater Assessment Report is also required with an application for all commercial systems, in accordance with Council's On-Site Sewage Management and Greywater Reuse Policy.

D. Lifting the Bar

The following represents some ways in which applicants can demonstrate additional commitment to on-site sewage management principles expressed in this DCP. Demonstration of this commitment may lead to Council considering variation of development controls. Applications that vary the development controls listed in this section will need to demonstrate that the proposed development complies with the objectives relevant to the development controls it seeks to vary.

- a) Adopting the latest techniques/technology for on-site sewage management to maximise treatment and minimise any environmental impacts from run-off and land management.
- b) Design of all OSSM systems to allow for reuse of treated wastewater for non-drinking purposes, such as irrigation and toilet flushing (in accordance with NSW Health, Department of Water and Energy and NSW Office of Water requirements).
- c) Treatment of on-site effluent to a secondary or tertiary level before it enters any centralised sewage management system.

E. Other Relevant Information

This DCP recommends that applicants seeking to address this issue should also refer to other relevant information including:

- a) Penrith City Council's *On-site Sewage Management and Greywater Reuse Policy*, 2014
- b) *Local Government (General) Regulation 2005*.
- c) Standards Australia/Standards New Zealand (2000) AS/NZS 1547:2012 On-site domestic wastewater management
- d) Department of Local Government, NSW Environment Protection Authority, NSW Health, Department of Land and Water Conservation and Department of Urban Affairs and Planning (1998) *Environment and Health Protection Guidelines – On-site Sewage Management for Single Households*.
- e) *Sydney Regional Environmental Plan No.20 - Hawkesbury Nepean River (No.2 - 1997)*.

13.4 Engineering Works and Construction Standards

A. Introduction

The purpose of this section is to ensure that engineering works, such as earthworks, roads, traffic management devices, footpaths, stormwater and drainage systems, are designed and constructed to appropriate standards, and in accordance with sound engineering practice.

B. Objectives

- a) To ensure a consistent approach to the design and construction of engineering works; and
- b) To set performance standards for the design and construction of engineering works.

C. Controls

All engineering works shall be undertaken in accordance with the provisions of Council's:

- Stormwater Drainage Specifications for Building Developments
- Council's Water Sensitive Urban Design (WSUD) Technical Guidelines;
- Engineering Design Specifications for Civil Works; and
- Engineering Construction Specifications for Civil Works.

Copies can be obtained from Council.

13.5 Development Adjacent to the Sydney Catchment Authority Controlled Areas – the Warragamba Pipelines

A. Objectives

- a) To ensure the Warragamba Pipelines are taken into account in siting, designing and constructing in any proposed development adjoining or in the vicinity of the pipelines.
- b) To ensure that development adjacent to the Warragamba Pipelines corridor does not impact on the continued operation and maintenance of the water supply infrastructure.

B. Controls

- 1) Where major development (including subdivision) is proposed adjacent to the Warragamba Pipelines corridor, applicants shall consult with the Sydney Catchment Authority (SCA) as part of the process of preparing the development application. Development is to be consistent with the SCA publication "*Guidelines for development adjacent to the Upper Canal and Warragamba Pipelines*". Any written requirements of the SCA shall be submitted with the DA and the DA documentation shall show how the requirements have been addressed.
- 2) Prior written approval shall be obtained from the SCA for any access that may be required to the Warragamba Pipelines corridor during the investigation and construction phases.
- 3) Access points to the Warragamba Pipelines corridor for SCA staff and contractors to carry out inspections and maintenance shall be retained or provided in accordance with SCA requirements.
- 4) Stormwater systems serving development adjacent to the Warragamba Pipelines shall be designed to ensure that stormwater does not enter the Warragamba Pipelines corridor.
- 5) Appropriate security fencing shall be provided, or existing security fencing retained along the length of development boundaries that directly adjoin the Warragamba Pipelines corridor, in accordance with SCA requirements.
- 6) Road crossings of the Warragamba Pipelines shall be minimised and located and designed in accordance with SCA requirements.
- 7) Where possible, a local road or shareway shall be provided between development and the Warragamba Pipelines corridor.
- 8) Earthworks (excavation or filing) and landscaping works carried out adjacent to or crossing the Warragamba Pipelines shall avoid damage to the infrastructure in accordance with SCA requirements.