

CHAPTER 2.6 COMMERCIAL HYDROPONIC DEVELOPMENT

2.6.1. INTRODUCTION

The purpose of this Chapter is to provide specific development guidelines for commercial hydroponic and undercover horticultural development.

2.6.1.1 Objectives of this Chapter

- To set out Council's requirements for the establishment and operation for commercial hydroponic and undercover horticultural development;
- To ensure that commercial hydroponic and undercover horticultural development are appropriately sited, operated and managed to avoid land use conflict and environmental impacts.

2.6.1.2 Relationship to other Chapters and Policies

This chapter is to be read in conjunction with relevant requirements of Part 3: Environmental Controls of this Development Control Plan as well as, but not limited to, the following:

- Chapter 2.14: Waste Management;
- Civil Works Specification.

2.6.1.3 Glossary

Note: the terms used in this Chapter have the same *meanings* as those terms defined by within the *Central Coast Local Environmental Plan 2018 (CCLEP 2018)*. Where the terms are not defined by CCLEP 2018, the following definitions are to be adopted:

commercial hydroponic development means the growing of plants within structures without soil, except for produce grown for personal consumption or enjoyment, where the area using crop protection technology occupies an area greater than 2,000m².

horticulture using crop protection technology means the growing of plants within sheds, greenhouses, poly houses or other synthetic structures which:

- includes the growing of vegetables, flowers, ornamental plants and orcharding for commercial purposes; or
- occupies an area greater than 2,000m², or
- in the opinion of the consent authority, is likely to cause a significant impact on water quality.

2.6.1.4 Application

The provisions of this chapter apply to development for the purposes of commercial hydroponic development or horticulture using crop protection technology across the Central Coast Local Government Area.

This chapter does not apply to the growing of produce grown for personal household consumption or enjoyment or soil based activities involving fruit and vegetable cropping or orcharding activities which require shade cloth or hail netting.

The following information is required to be submitted as a minimum with any application for development for the purposes of commercial hydroponic development or horticulture using crop protection technology.

- a a detailed site plan indicating the location of all proposed site works and features including but not limited to:
 - i. dwellings, site office, sheds, storage areas for equipment fuel, pesticides and fertilisers;
 - ii. greenhouse sheds and areas for future expansion;
 - iii. nutrient detention ponds and water storages;
 - iv. topographic features and landscape;
 - v. location of any existing service easements.
 - vi. existing watercourses and extent of flooding over the subject property;
 - vii. any existing native vegetation to be removed including a detailed description of species;
- b in addition to any prescribed requirements, the Statement of Environmental Effects for any such development is to also include the following information:
 - i. previous site development history;
 - ii. employment numbers;
 - iii. hours of operation (construction, harvesting, transport, maintenance, etc.);
 - iv. engineering calculations for water consumption;
 - v. transport, access, loading and unloading requirements, including:
 - estimated average and maximum hourly, daily and weekly truck movements and routes
 - truck types and sizes;
 - road dilapidation report; and
 - measures to prevent dust generation.
 - vi. water management plan;
 - vii. waste disposal arrangements;
 - viii. the visual impact on land within the line of sight of the proposed development.
 - ix. details of the materials of construction of all sheds or igloos are to be submitted;
 - x. development concurrence from Subsidence Advisory NSW where the land is located within a Mine Subsidence District.

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2.6.1.5 Suitable Locations

OBJECTIVE

- To identify relevant site constraints to be considered during the selection of sites for commercial hydroponic development to minimise the potential for land use conflicts.

REQUIREMENTS

Generally, for a site to be considered suitable for commercial hydroponic development the following attributes should be present:

- a land which will not be developed for residential, industrial or rural-residential purposes in the near future;
- b land which is not constrained by natural hazards such as flooding, land with slopes less than 8% or significant ecological values;
- c land which is capable of providing the minimum buffer distances as recommended by the NSW Department of Primary Industry document *Living and Working in Rural Areas, 2007* (as updated) from adjoining land uses, watercourses and water bodies;
- d sites which are sheltered from strong dry winds;
- e close proximity to major arterial roads for transport;
- f land which can be serviced by town water or from other sources such as dams, ground water or roof runoff from sheds;
- g areas which contain a suitable range of lot sizes for hydroponic production - a minimum suitable lot size for an operational hydroponic farm in excess of 2 hectares is required to establish and provide landscape screening, working areas and internal roads.

2.6.2 DEVELOPMENT REQUIREMENTS

2.6.2.1 Water Quality and Water Supply

Excess and recycled water from hydroponic operations contains high levels of residual nutrients which represent a potential pollution problem for the subject site, adjoining lands and waterways.

OBJECTIVE

- To ensure that surface and ground water resources are not adversely impacted by hydroponic development activity

REQUIREMENTS

- a Discharge of wastewater or grey water onto downstream lands is not permitted.
- b Drainage systems must not interact with soil or groundwater.
- c Local drainage patterns are to be maintained and drainage lines should be located to catch stormwater. Stormwater should be directed to a suitable dam or water trap to prevent the direct discharge or leakage of stormwater from the site. Downstream effects on sensitive areas, such as wetlands from changes to natural water flows or existing retention areas should also be investigated.

- d Artificial wetlands may be used to remove nutrient loads from wastewater and should be differentiated from natural wetlands. Landholders may elect to install recycling and water treatment systems including artificial wetlands for the treatment of spent solution. Mini wetlands, nutrient stripping ponds, reed beds or macrophyte plants that absorb nitrogen and phosphorus can also be used.
- e Drainage lines and dams are to be installed before the erection of any structures.
- f Structural soil conservation works are required to control surface runoff.
- g In non-sewered area, the provisions of Chapter 3.7: On-Site Sewage Management (Non-Sewered Areas) apply.
- h Composting and green waste storage areas provided on-site should be bunded in order to ensure that they drain into grey water reservoirs.
- i Where there is connection to Council's water and sewerage system, works are to be in accordance with Council's Civil Works Specification.

2.6.2.2 Noise and Odour

Some hydroponic activities generate a substantial amount of plant residue after harvesting. Additionally, noise generated by ventilation fans, coolrooms and generators can generate land use conflicts.

OBJECTIVE

- To ensure that commercial hydroponic development has minimal adverse impact on the amenity of surrounding areas by way of noise and odour

REQUIREMENTS

- a Prevailing wind conditions are to be utilised to appropriately site any proposed on site green waste storage or composting areas away from sensitive receptors (including but not limited to dwellings).
- b The impacts of noise associated with ventilation fans, coolrooms and generators is to be considered when siting such infrastructure to avoid or limit impacts on sensitive receptors (including but not limited to dwellings).

2.6.2.3 Visual Impacts

OBJECTIVE

- To manage the visual impacts of hydroponic development.

REQUIREMENTS

- a Dense landscape treatment measures or landscape mounding measures are required to screen greenhouse structures. The initial planting will be required to be advanced trees.
- b Greenhouse structures are to be set back a minimum of 30 metres from the front boundary of any road and 10 metres from any side boundary. Council may require greater setback distances for commercial hydroponic operations which occur in visually prominent locations like those properties which front the Pacific Highway and other main roads.
- c Maintenance of natural airflows should be considered around sheds when planning a tree or a shrub planting program.
- d Use materials and colours which compliment the features of the landscape in visually exposed locations.

- e Vegetation should be retained and massed plantings established to enable effective screening of lightly coloured and reflective structures, such as igloos and shade houses.