

50. ECO-INFO

RAINWATER TANK SYSTEMS

Introduction:

Wyong Shire Council has adopted a Development Control Plan for Quality Housing (DCP 100), which requires rainwater tanks be installed for all new single dwellings in residential and rural zones within the Shire. This Eco-Info sheet has been produced as a reference guide to address the requirements of DCP 100, as well as Council's *Guidelines for the Installation of Rainwater Tanks on Residential Properties* and the AS/NZS 3500.

It is intended that this EcoInfo sheet will eliminate unnecessary costs for consumers, suppliers and installers, and facilitate the expedition of approvals of Occupation Certificates, by clearly outlining tank, pump and system requirements, and by detailing information which must be submitted to Council with the application for Development Consent for the dwelling.

Levels:

The Development Application is to include the RLs of the roof gutters draining to the tank, as well as the RLs of the tank inflow, the tank exit stormwater line and the inlet to the drainage easement or street drainage system.

Tank Requirements:

The Development Application is to include details of the tank type, model and it's specifications, in conformity with the following requirements:

Identification

The application shall be accompanied by:

- A copy of the Standards Mark licence
- A copy of the Schedule attached to the Standards Mark licence.

The system shall be clearly marked by attaching a plaque to the lid of an above ground or semi-above ground tank; or to the manhole of a below ground tank. The plaque shall identify the brand name.

Structural Integrity

(a) Below ground tanks: shall be structurally adequate to withstand the forces exerted on the tank by internal and external loads. Additionally, the lid of the tank shall be able to withstand general non-vehicular traffic including any pump and associated equipment located upon it (for tanks located beneath driveways and garage floor slabs, the tank shall be able to withstand vehicular traffic);

(b) Semi- above ground tanks: shall be structurally adequate to withstand the forces exerted on the tank by internal and external loads; and

(c) Above ground tanks: shall be structurally adequate to withstand the forces imposed by the tank's hydraulic capacity.

Capacity

Tanks shall have a minimum 5,000 litres holding capacity, measured to the invert of the overflow pipe for the tank. The development application shall include scaled, double line working drawings of the tank. These are to include a fully dimensioned vertical and horizontal section through the tank, detailing the internal height to the invert of the overflow line, together with an elevation of the tank showing overall height. Calculations detailing the volume of the tank to the invert of the overflow (in litres) shall be submitted.

Construction

The tank shall be capable of holding water without loss, have internal access and be constructed in a material that will not:

- Effect the longevity of the household plumbing system (i.e. corrosion); or
- Taint or discolour the water.

A statement from the manufacturer shall be submitted to Council, describing the materials used in the tank construction and certifying its ability to meet these requirements.

Details of access for desludging an above ground or semi- above ground tank shall be submitted to Council

Details of the manhole access shall be submitted to Council for tanks with a submersible pump.

All above ground tanks are to be sited on a concrete base, a minimum of 100mm thick.

Pump Requirements:

The Development Application is to include details of the pump type, model and its specifications, in conformity with the following requirements:

Specifications

Head Pressure of not less than 30 metres shall be available to any fixture whilst no other fixtures on the property are being used. Hydraulic calculations are to be submitted, indicating the head pressure loss to a fixture over a 20 metre run of water supply line.

The pump shall supply a continuous flow of water at all times except in the event of a power failure. Pump specifications indicating that the pump is self-priming shall be submitted to Council. A tank schematic shall be provided, indicating that the foot valve is installed to the intake line of the pump.

The pump shall be operated from a 240 Volt power supply. Pump specifications indicating compliance with this requirement shall be submitted to Council.

The pump shall not give rise to a sound pressure L90 audible above the L10AMB background when measured at no more than 2 metres from the source. A report and details from a suitably qualified acoustic engineer shall be submitted to Council, demonstrating compliance (including specifications of mitigation methods required to achieve this requirement). This may include details of an acoustically designed pump enclosure.

Plumbing Fittings

All plumbing fixtures used within the system are to comply with AS/NZS 3500 – 2003. A scaled diagram double line drawn is to be submitted to Council, including the following:

- First flush diverter / configuration;
- 20mm copper or PVC pressure pipe outlet lines from the tank;
- 90mm stormwater grade PVC inlet and overflow lines;
- Backflow mains water prevention by either a 2845.1 standard marked dual check valve or 100mm physical air gap; and

- Vermin proofing by way of 316 stainless steel mesh to the overflow line and all other access points to the water tank.

Owner's Manual

A users instruction manual, suitable for use by the domestic operator, shall be produced and be supplied to the owner upon installation of the system. The manual shall include the following:

- An overview of the tank;
- An overview of the pump and electrics;
- A schematic diagram of system electrics and plumbing;
- Suppliers warranty and service life;
- Trouble shooting and signs of failures;
- Desludging requirements;
- A maintenance recording sheet; and
- Safety information.

Enquiries:

Enquiries regarding the provisions of DCP 100 – *Quality Housing* and Council's rainwater tank system requirements can be directed to Council's Customer Service Centre on 4350 5555.