



**Greywater Processing Devices (GPD)
Single Domestic On-site Wastewater Management**

1. Introduction

Advisory Note 7 considers the role, context, uses and function of Greywater Processing Devices (GPD) in Single Domestic On-site Wastewater Management, in this case, wastewater management in single **sewered** houses.

DGTS = Domestic Greywater **Treatment** System
GPD = Greywater **Processing** Device
GDD = Greywater **Diversion** Device

2. Context of a Greywater Processing Device (GPD)

A GPD is neither a:

- Domestic Greywater Treatment System (DGTS); nor,
- Greywater Diversion Device (GDD).

The rationale is as follows:

Clause 3 of the Local Government (General) Regulation 2005, defines a “sewage management facility” to mean:

*“(a) a human waste storage facility, or
(b) a waste treatment device intended to process sewage,
and includes a drain connected to such a facility or device.”*

A DGTS is a “sewage management facility” because it is a waste treatment device intended to process sewage (greywater is a component of sewage). A DGTS also requires NSW Health accreditation because it treats greywater using a process described in the Local Government (General) Regulation 2005, Clause 40(1)(h) viz, *“waste treatment devices that treat sewage using a specific process to produce biosolids and disinfected effluent to a standard suitable, either separately or in combination, for recycling by surface or sub-surface irrigation or by internal or external household use,”*

(Note: The DGTS Accreditation Guideline 2005 is under review and should be released in a few months.)

A GDD is neither a “sewage management facility” nor does NSW Health accreditation apply. However, it does require the “WaterMark” stamp because it is a plumbing fixture under the Plumbing Code of Australia. If a GDD complies with the Plumbing Code of Australia it does not need installation approval of the local council. (See Clause 78A Local Government (General) Regulation 2005.)

A GPD is a “sewage management facility” as it processes greywater but because it does not produce, store and treat **biosolids**, NSW Health accreditation is not applicable.

Device	Sewage Management Facility	NSW Health Accreditation Applies
DGTS	Yes	Yes
GPD	Yes	No
GDD	No	No

3 What is a GPD?

At present there is only one GPD – the [Hydraloop](#). The Hydraloop only receives greywater from the shower and bath and optional washing machine rinse wastewater. The Hydraloop, manufactured in the Netherlands, uses physical separation and a biological treatment method to process and then disinfect greywater using UV light. No **biosolids**, such as sludge, are stored and treated as found in primary or secondary treatment process. This [video](#) describes the physical and biological processes.

4. Local Council Role

In NSW the local council is the regulator of the installation of single domestic on-site wastewater management systems, including GPD, under Section 68 of the Local Government Act, 1993, and the Local Government (General) Regulation 2005.

4. Standards

Australian Standards do not apply to GPD but testing to some components of *AS1546.4:2016 On-site domestic wastewater treatment units – Part 4: Domestic greywater treatment systems* would be required if NSW Health Accreditation had applied.

However, the Hydraloop has been tested according to the *USA National Sanitation Foundation NSF /ANSI 350 – 2012: On-site Residential and Commercial Water Reuse Treatment Systems* which is like AS1546.4:2016.

5. NSW Health Position

NSW Health has no objection to the installation of a GPD in general and the Hydraloop **provided:**

- The installation is approved by the local council under Section 68 of the Act.
- A GPD may only be installed on premises where there is no Aerated Wastewater Treatment System and no Secondary Treatment System.
- The GPD has had some appropriate testing in accordance with AS1546.4:1916 or an overseas equivalent to indicate that the final effluent is fit for purpose of indoor household usage.
- It is recognized that there will be instances where a GPD cannot be retrofitted into certain households such as concrete slab on ground construction.
- The installation complies with the Plumbing Code of Australia regarding an air gap or physical discontinuity between the drinking water supply and the GPD. Backflow prevention and WaterMark requirements may be applicable.
- The GPD is installed by a licensed plumber who is authorised by the manufacturer or supplier; and serviced at 2 yearly intervals by a service agent also authorised by the manufacturer or supplier.

- The GPD is installed such that the vessel is not exposed to direct sunlight.
- The GPD only receives greywater from a shower, bath or washing machine rinse water. Greywater from the kitchen, dishwasher, spa bath and laundry tub are excluded. No wastewater from a toilet or other ablution fixture is permitted. No solids are to be discharged to the GPD.
- The owner / occupier of the premises is educated and has received an owner's manual about limiting contamination of the greywater. Solid materials (such as grit, sand or stones), and chemicals, pharmaceuticals, paint residues, hair dye, bleach and disinfectants must be strictly excluded.
- The processed greywater may be reused for toilet flushing, washing machine and garden purposes provided either sub-surface irrigation is practiced, or a fixed, low pressure coarse spray is used. The treated greywater is not to be used for car washing or topping up swimming pools.
- The installation complies with Clause 36, Local Government (General) Regulation, 2005, which states:

“36 Sewage management facilities generally
A sewage management facility:

(a) must be made of durable and non-corrosive components, each having an expected service life of at least:

(i) 5 years, in the case of a mechanical or electrical component, and

(ii) 15 years, in any other case, and

(b) must be installed or constructed:

(i) in accordance with the appropriate specifications and in accordance with good trade practice, and

(ii) so as to allow ease of access for maintenance, and

(iii) with regard to the health and safety of users, operators and persons maintaining the facility, and

(c) must be installed or constructed so as to make appropriate provision for access to and removal of contents in a safe and sanitary manner, and

(d) must, if it is intended to be a permanent fixture, be anchored to prevent movement.”