

FACT SHEET



WATER

SAVING

GREYWATER READY PLUMBING

GREYWATER IS HOUSEHOLD WASTEWATER THAT HASN'T COME INTO CONTACT WITH TOILET WASTEWATER. THIS INCLUDES SHOWER, BATH, LAUNDRY AND HAND BASIN WATER WHICH CAN BE SAFELY APPLIED TO THE GARDEN THROUGH APPROPRIATE REUSE SYSTEMS AND CAREFUL SELECTION OF DETERGENTS AND CLEANING PRODUCTS.

Kitchen and dishwasher wastewater is typically excluded because it contains food scraps, fats and oils which can cause clogging of greywater system filters and drippers, as well as harsh detergents which can impact soil and plant health.

On average in Australia, we produce around 100 L of greywater per person per day, so a family of four could expect to produce around 150,000L per year. Reusing greywater takes the pressure off precious scheme water resources and provides a valuable source of irrigation water that is independent of water restrictions.

GREYWATER REGULATIONS

In WA the requirements for approved greywater reuse are outlined in the Department of Health Code of Practice for the Reuse of Greywater in Western Australia (2010), which details the approvals process, greywater irrigation setbacks, application rates and dispersal area calculations. Approvals for the installation and operation of greywater systems are managed by local government and all plumbing work must be done by a licensed plumber.



MORE INFO

Advanced Wastewater Systems:
www.awws.com.au

Greywater Industry Group:
www.gwig.org

WA Department of Health:
www.public.health.wa.gov.au

TYPES OF GREYWATER SYSTEMS

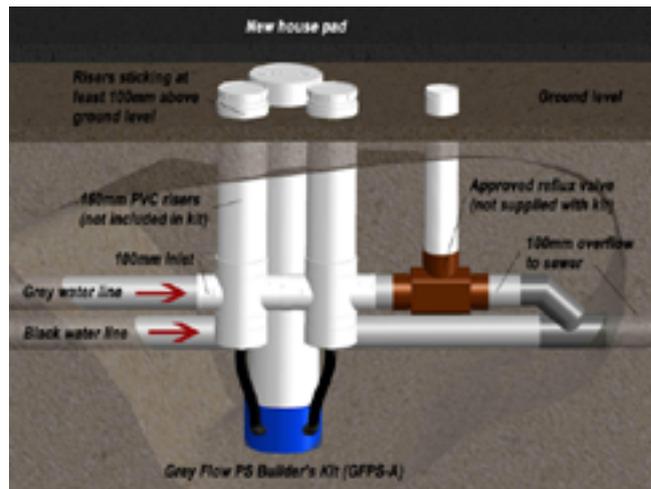
Greywater systems range from simple direct diversion types for reuse on the garden via sub-mulch drippers, through to advanced treatment types for supplying water to garden taps, toilets and washing machines. In situations where there is regular irrigation demand, there is a compelling argument in favour of direct diversion systems in terms of cost, energy use and maintenance. A list of current approved systems in WA can be found on the Department of Health web site. In other states, contact your local council for this information.

GREYWATER READY PLUMBING

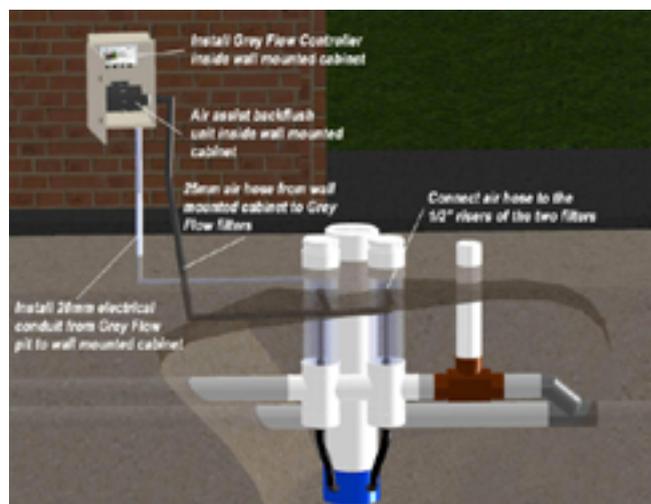
Safe and compliant greywater reuse requires access to greywater drainage without contamination from toilet and kitchen wastewater. Unfortunately current industry standard plumbing methods make this very difficult and costly, if not impossible in most situations once a house has been built. Plumbing drainage can be configured to be 'greywater ready' for the installation of an approved greywater system at a later date. This simply means that the drainage pipes are laid out so that the suitable greywater streams (bath/shower, washing machine, laundry trough and hand basins) can be directed via a greywater system prior to joining the main sewer line. Other regulatory requirements also need to be considered, including adequate falls to allow for overflow or manual diversion of greywater to sewer, as well as allowance for a work zone clear of other services (such as water, power, gas and telecommunications). This additional work is not complicated but it does add costs on and above standard drainage works for additional materials and labour, which typically ranges between \$1,000 - \$2,000, depending on house size and layout as well as location and number of greywater sources.

SYSTEM INSTALLED AT JOSH'S HOUSE

Josh has installed a direct diversion system called the Grey Flow by Advanced Wastewater Systems, which is approved for use nationally. It's a pumped system that has the advantage of an automatic filter back flush device to reduce maintenance. It also has a very practical two-stage installation process which begins with the installation of a sump and dual interceptor unit (referred to as the 'Builder's Kit') as part of the initial drainage plumbing works, followed by the installation of the pump, controls and irrigation at a later stage during landscaping. This greatly simplifies the process for making a house 'greywater ready' and eliminates a number of the issues identified above.



Grey Flow Builder's Kit



Grey Flow Pump & Controls



Grey Flow Finished Levels

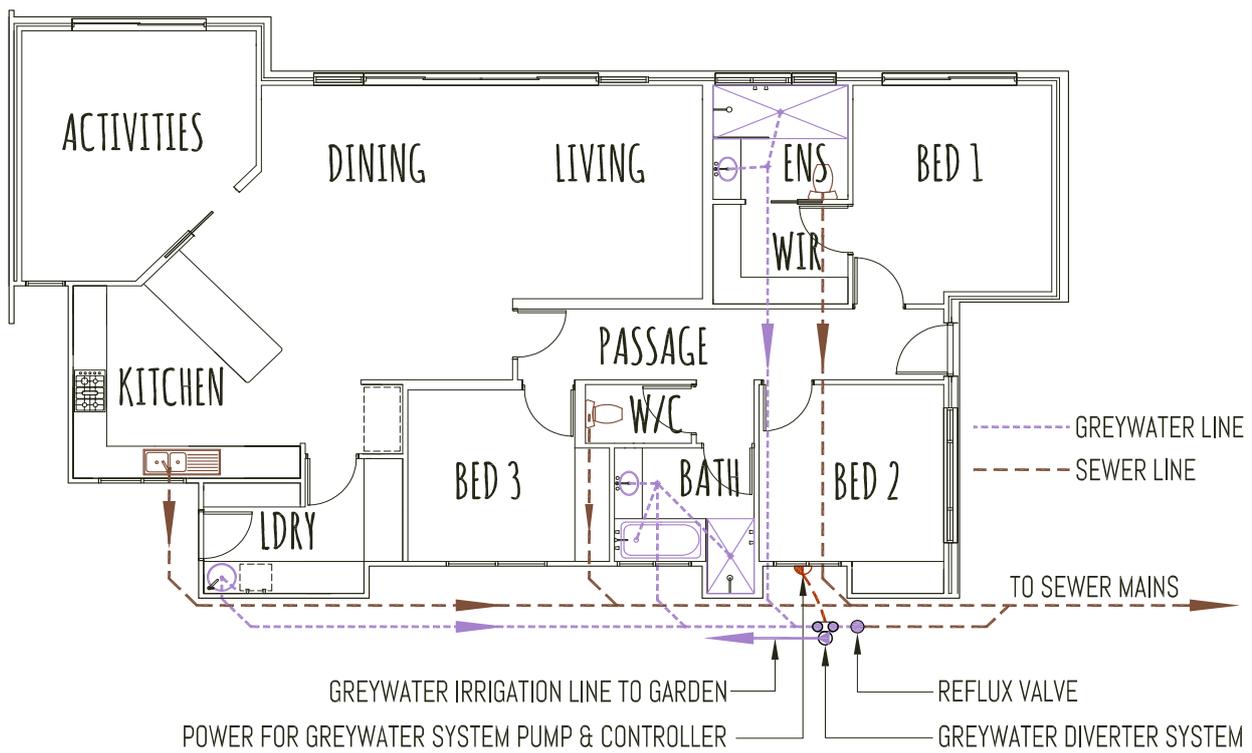
INDICATIVE COSTS

The greywater ready plumbing layout for Josh's House has been provided in the plan below, with an indicative costing for complete installation as follows:

- Greywater ready plumbing by builder/plumber on and above standard single line wastewater drainage, including additional set out requirements, increased drainage line, reflux valve and additional number of vents: \$1,550¹
- Grey Flow greywater system stage 1 – 'Builders Kit' (supplied and installed by builder/plumber): \$900
- Grey Flow greywater system stage 2 – pump, controls and irrigation (supplied and installed by contractor): \$2,500²
- Local Government approval fees: \$200³

Qualifying Notes on Costs:

- 1 This figure will vary depending on house size and layout as well as location and number of greywater sources.
- 2 This includes irrigation materials for an area of approximately 50m² which can be deducted from the irrigation allocation in a project budget.
- 3 Some Councils waive this fee.
Costs are inclusive of GST.



Greywater Ready Plumbing Layout at Josh's House



FOR MORE INFORMATION, VISIT
WWW.JOSHSHOUSE.COM.AU