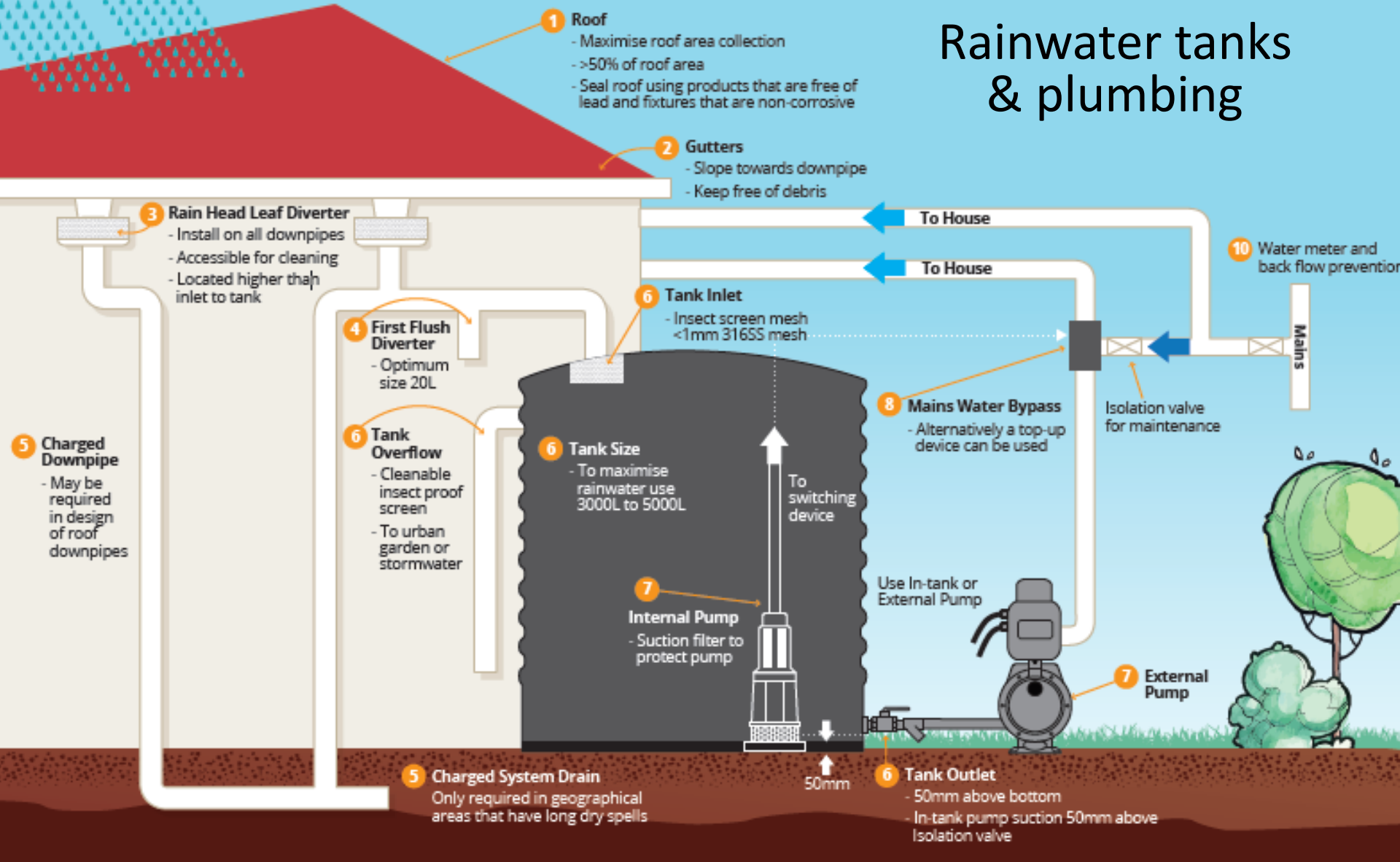


Rainwater harvesting & re-use

Rainwater tanks & plumbing

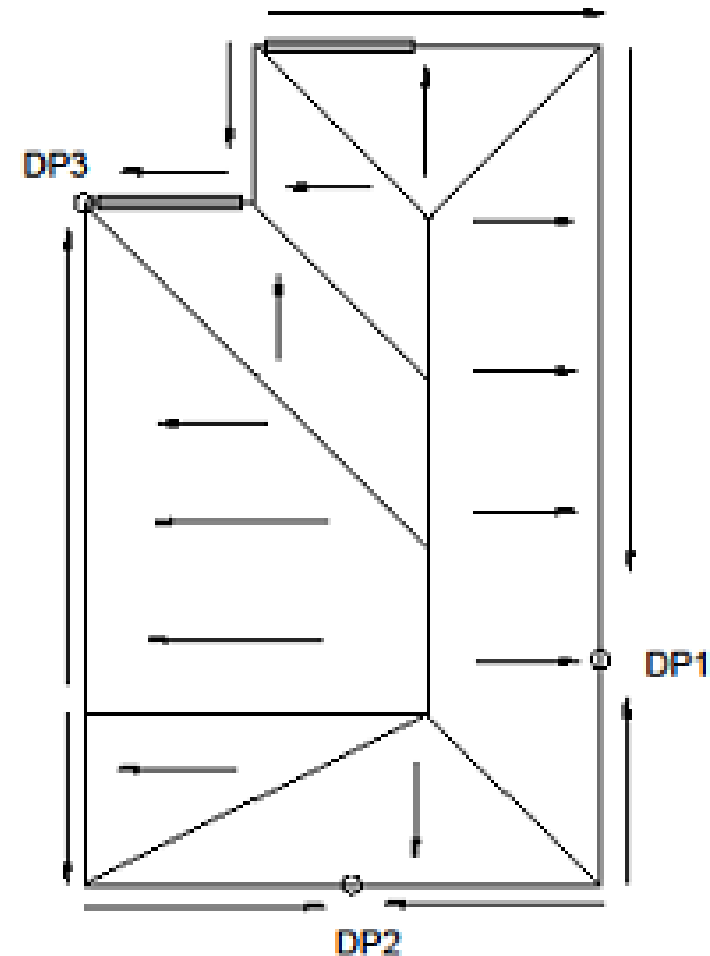


Rainwater harvesting, residential design specification

Source: Rainwater Harvesting Association of Australia & Urban WaterCycle Solutions

Factors in tank size selection

- Supply v demand
- Yields will be dependant on:
 - annual rainfall
 - roof area connected to tank
 - Amount of and frequency of rainwater use:
 - indoor (toilet, laundry, hot water service)
 - Outdoor (garden, “leaky tank”)
 - Capacity of the tank connected to roof



ROOF LAYOUT AND DRAINAGE
DIRECTION TO DOWN PIPES

Percentage of time rainwater tank will meet full domestic internal daily demand



KENT TOWN

(Average Annual Rainfall 583 mm)

Rainwater Use Option		High internal use			Medium internal use 1			Medium internal use 2			Low grade uses			
Description		11L single flush toilet, 100% laundry (front load WM) & HWS			(6/3L) Dual flush toilet, AAA-rated shower head, 100% laundry (top load WM) & HWS			(6/3L) Dual flush toilet, AAA-rated shower head, 100% laundry (front load WM) & HWS			(6/3L) Dual flush toilet and 100% laundry (front load WM) <u>only</u>			
Tank Capacity (L)		1,000	2,000	5,000	1,000	2,000	5,000	1,000	2,000	5,000	1,000	2,000	5,000	9,000
Roof area to be connected to rainwater tank (m²)	50	9%	11%	11%	17%	19%	19%	23%	27%	28%	51%	59%	65%	68%
	100	19%	26%	30%	30%	40%	47%	39%	50%	60%	65%	77%	87%	97%
	150	25%	36%	46%	37%	50%	63%	47%	60%	72%	71%	83%	95%	100%
	200	29%	42%	56%	41%	55%	70%	51%	65%	79%	74%	87%	98%	100%

Assumptions: The internal water use estimates are based upon a 3 person household.

Stormwater assessment tool for small-scale development



[Insite Water](https://www.watersensitivesa.insitewater.com)

<https://www.watersensitivesa.insitewater.com>



RAINWATER TANK SIZING



DETENTION TANK SIZING



WATER QUALITY



WATER EFFICIENCY



Rainwater tank solutions for all block sizes



Rainwater tanks are still achievable for small blocks



Dwelling footprint A – 130m²

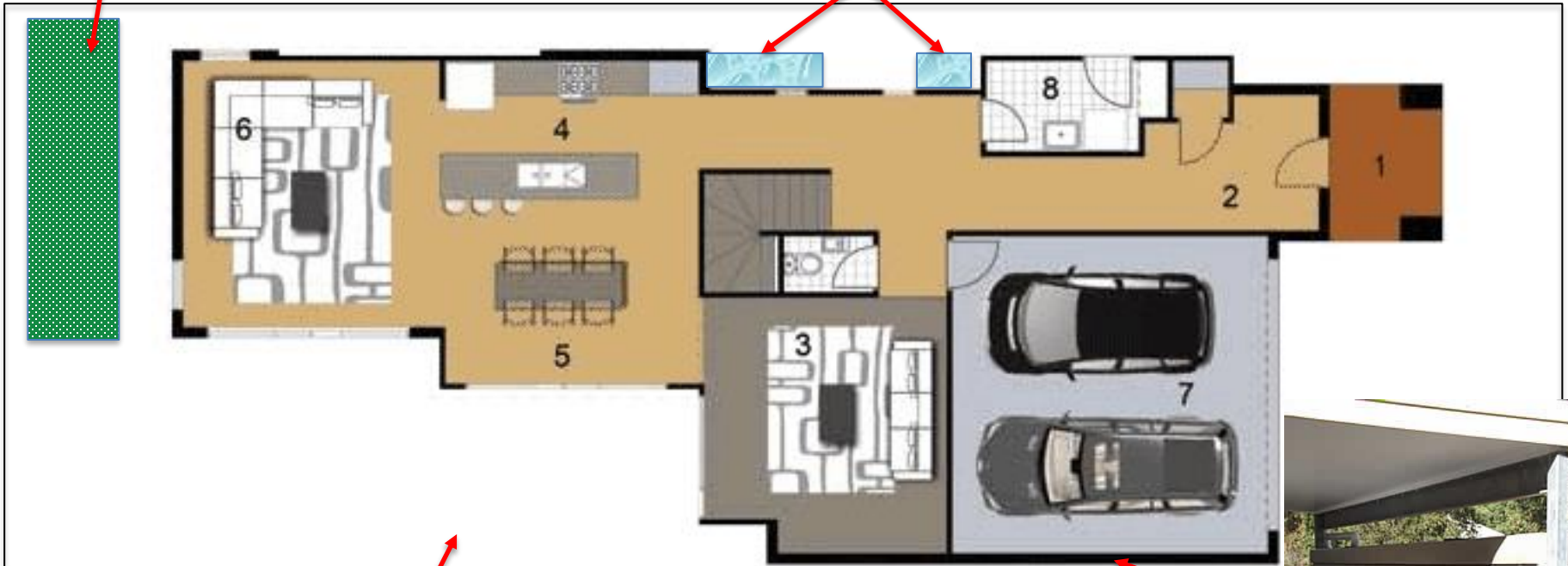
Allotment Size = 230m²

Site coverage 56%

Source: galleryliving.com.au



Source: www.maxiplas.com



Source: rosemarkwatertanks.com.au



Source: www.tightspottanks.com.au/



Create space for rainwater tanks

Choose a house floor plan with nooks that create light wells and space for slim line rainwater tanks, without blocking access to rear of property.



Source: selectwatertanks.com.au



Source: maxiplas.com.au

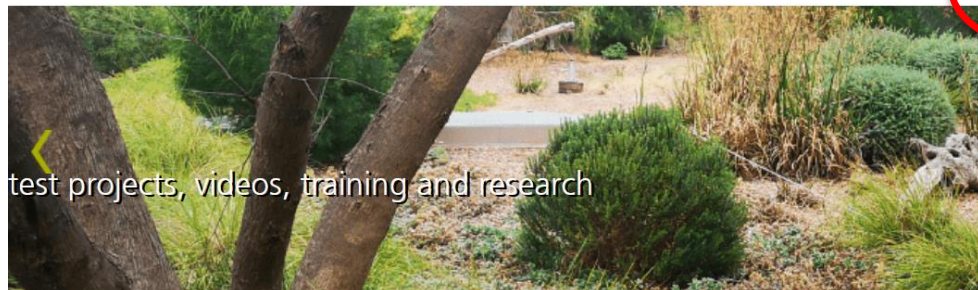


Source: completetanksandpumps.com.au

Maintenance of water quality

Maintenance task	When
Undertake a visual check of leaf diverters and tank inflow	During rainfall events
Run a hose or flush the toilet when there is rainwater in the tank and check that the pumps switches on to make sure the system is not relying on mains water	Monthly
Empty and clean gutters, first flush diverters and rain heads	At the start of each season
Remove, clean and check inlet, outlet and overflow strainers	Quarterly (start of each season) or when filled with debris
Clean or replace water pump filters	Every six months or as directed by manufacturers
Water filtration maintenance (replace system components)	As directed by manufacturers
Charged downpipes should be drained at their lowest point	At the end of the wet season and the end of the dry season
Do not remove accumulated sediment or sludge from tank bottom unless necessary. This sludge actually performs valuable heavy metal capture and biological treatment train functions	Only remove sludge if it reaches a depth approaching the tank outlet point





test projects, videos, training and research

WSUD for ...

Developers – small-scale infill

WSUD assets

Developers – major infill/greenfield development

Guidelines

Local Government

Tools

Community

Standard drawings

Community

Community

Smart water solutions for
your home & backyard

Cooler, greener Adelaide

Smart water solutions for your home and backyard



Rainwater tanks for your home &
backyard



Reducing hard surfaces outside the
home



Raingardens in your backyard



Ideas for your new home



Presentations