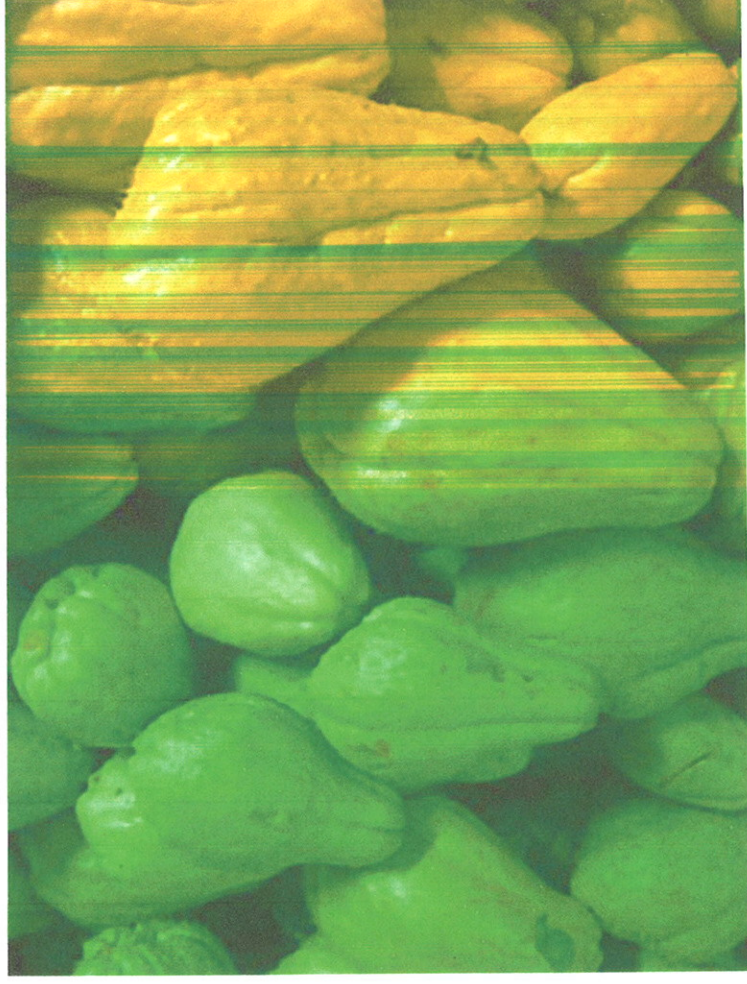


# Choko Farm Permaculture Design



Nevin Sweeney

Table 113 – House checklist

Too hot in summer	Insulate ceiling	Done
	Pergola and vines	Possibility for kitchen dining room area
	Deciduous trees	In place for third bedroom (mulberry)
	Shady verandas	Possibility for kitchen dining area, deck already in place
	Breezeways/corridors	N/A
	Solar fans	Possibility, ceiling fans already in bedrooms & lounge
	Cool air tunnels	Difficult
	Deciduous creepers	Grapes possible at front of house
	Shade house with plants	Difficult
Too cold in winter	Insulation	In place in ceiling
	Double glazing on coolest side	Shutters and polystyrene bats in place for windows, no south facing windows
	Thermal mass in doors and walls	N/A
	Lined curtains and pelmets	Curtains, shutters and polystyrene batts
	70% glass wall on sunny side	N/A
	Compact house	Youbetcha – 12 squares
	Gap sealing	Done
	Glasshouse to sunny side	Difficult
Too humid	Not applicable	
Too dry	Not applicable	
Artificial light during the day	Work in better lit room	Yup
	Skylights	Possibility
	Paint walls a light colour	Done where appropriate
	Light furnishings	Done where appropriate
	Replace veranda with pergola	N/A
	Insert wall or glass door	N/A
		We use 12 volt lights
Severe winds	Build mounds	N/A
	Plant windbreaks	N/A
	Insulation	Done
	Trellises	Possibility – tracks in front of garage
	Sun traps	Glasshouse
Pollutants – exterior/interior	Dense fine leaf plants	Possibility
	Change to natural materials	Most stuff is older and well past the outgassing stage
	Improve ventilation	See above
	Cook own food	Youbetcha
	Prepare own cosmetics and medicines	Low use of cosmetic and medicines – small number of

		prescription meds – home production difficult
Other house problems: Noise	Fences	In place where appropriate
	Insulation	Ditto
	Double glazing	Not required
	Complain to responsible body	Youbetcha
Poor work/leisure areas	Not applicable	
Sensory deprivation	Not applicable	
Chemicals: Furnishings, building materials paints	Change to natural fibres and dyes	Working on it
	Mud brick; adobe; stone; wood	N/A
	Whitewash and tints	N/A
Cleaning agents	Natural glues, waxes and sealants	Working on it
	Natural soap	We make our own
	Borax	WTF
	Methylated spirits	Working on it
	Bicarb	Working on it
	vinegar	We make our own
Machines	Provide excellent air circulation	You got it!
	Frequent rests	You got it!

## Water Consumption

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Av Daily Litres	Total Litres/ week
Weekday/ Date	Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
Washing up Pre-Rinse @ 6 litres/rinse	1	1	1	1	1	1	1	6	42
Washing up @ 10 litres/wash	2	3	2	3	2	3	2	25	170
Shower (hair wash) @ 40 litres/shower	1		1		1		1	23	160
Shower (quick) @ 20 litres/shower	1	1	1	1	1	1	1	20	140
Toilet (full flush) @ 4.5 litres/flush	2	2	2	2	2	2	2	9	63
Toilet (half flush) @ 3 litres/flush	3	3	3	3	3	3	3	9	63
Washing machine @ 68 Litres/wash	3			2				48	340
Cooking & drinking @ 7 litres/day	1	1	1	1	1	1	1	7	49
Teeth cleaning @ 1 Litres/clean	1	2	1	2	1	2	1	1.5	10
Shaving @ 2 Litres/shave	1			1				0.6	4
Hand washing @ 1 Litres/wash	18	18	18	18	18	18	18	18	126
Cleaning water (surface cleaning) @ 1Litres/day	1	1	1	1	1	1	1	1	7
Pet Water (chooks/cats etc) @ 1 Litres/day	1	1	1	1	1	1	1	1	7
Watering Garden (hose) @ 18 litres/min	20			20				103	720
<b>Totals</b>								272	1901
<b>Total yearly water consumption</b> (Total weekly consumption x 52)									98852
	June Quarter		September Quarter		December Quarter		March Quarter	Ave for Year	
Average daily water usage from water bill (litres)	210		260		258		336	266	

### Volume of Greywater Available for Re-use

Source	Daily Volume (Litres)	Weekly Volume (Litres)	Yearly Volume (Litres)
Shower	43	300	15,600
Washing Machine	48	340	17,680
Total	91	640	33,280

### Volume of Rainwater Available for Harvest

Annual Rainfall (from Bureau of Meteorology)	712
Roof Catchments in m <sup>2</sup>	
House roof catchment in m <sup>2</sup>	104
Garage/carport etc. Catchment in m <sup>2</sup>	25.8
Sheds catchment in m <sup>2</sup>	24.6
Total catchment	154.4
Total potential rainwater catchment per year (annual rainfall x total catchment)	109,933 litres
less 15% contingency for runoff or other loss (Potential rainwater catchment x 0.85)	93,443 litres
Total water use per day (from water consumption spreadsheet)	272
Total water use per year (from water consumption spreadsheet)	98,852
Longest number of rainless days (from Bureau of Meteorology)	31
Water needed to cover longest number of rainless days (no of days x daily consumption)	8,432
Water storage required for water security + 20% contingency	10,540

### Volume of Rainwater Currently Harvestable

Total capacity of current tankage	11,000
Area of catchment currently available	97.1
Rainfall currently available per year (annual rainfall x current catchment area)	69,135





Plant list for 9 Phar Lap Pl

Area	Purpose/Use	What to grow	
Front Yard – Tree circle area	Fruit	Apple trees	
	Fruit	Lime trees	
	Fruit	Lemon tree	
	Fruit	Macadamia tree	
	Herb/Spice	Curry leaf tree	
	Fruit/oil	Olive	
	Edible flowers	Carnations	
	- Wicking beds	Perennial Vegetable	Asparagus
		Annual Vegetable	Capsicum
		Herb/spice	Chilli
Fibre		Cotton	
- Herb spiral	"Fruit"	rhubarb	
	Herb/spice	Borage	
	Herb/spice	Tarragon	
	Herb/spice	Lavender	
	Herb/spice/beverage	Lemongrass	
	Fruit	Strawberries	
	Herb/spice	Marjoram	
	Herb/spice	Oregano	
	Herb/spice	Lemon Verbena	
	Herb/spice	Rosemary	
	Herb/spice	Basil	
	Herb/spice	Coriander	
	Herb/spice	Cumin	
- Hedgerow	Essential oil	Melaleuca Alternifolia	
	Herb/spice	Bay Tree	
	Fruit/bush tucker	Lillipilli	
	Fruit	Feijoa	
	Fruit	Blackberry	
	Edible Flowers / rosehips	Rose	
	Beverage	Tea Bush	
	Beverage	Coffee bush	
	Herb/spice/beverage	Mint	
	- Banana Circle	Fruit	Bananas
Vegetable		Sweet potato	
- other	Fruit	Mulberry	
	Edible flowers	Hibiscus	
	Amenity	Ferns	
	Medicinal plant	Aloe Vera	
	Herb/spice	Nasturtiums	
Back Yard – Vegetable beds	Annual Vegetables	Beans	
	Annual Vegetables	Beetroot	
	Annual Vegetables	Bok Choi	
	Annual Vegetables	Broccoli	
	Annual Vegetables	Broad beans	
	Annual Vegetables	Cabbage	





## Employment/Moneymaking Opportunities

- Wooden toys from recycled timber
- Turned pot makers from recycled/local timbers
- Heirloom/open pollinated seedlings or larger plants for sale
- Permaculture consultant (after some experience)
- Teaching (workshops)
- Make and sell solar ovens, rocket stoves etc.
- Make potholders etc and other sewn home wares
- Knitting and sewing accessories
- Knitted/sewn items to sell

## Permaculture Design

Area 1 Shed Roof – Set up a duckboard made from recycled timbers and set up a no-dig garden planted with vegetables, possibly perennials

Area 2- Northern Front Fence – complete the wicker fence with mulberry canes and plant passionfruit along as a cover

Area 3 – Hedgerow

1. Ground cover – a mix of chamomile, creeping mint, strawberry and sweet potato
2. Shrubs – tea, clumping bamboo; almond (dwarf); coffee, blueberry; Feijoa
3. Climbers – hops, grapes, kiwifruit
4. Large trees (in place) – *Melaleuca alternifolia*; bay; native plum

Area 4 – Southern Front Fence – espaliered fruit and nut trees – almond; 2 apples 2 pears; 2 grapes