Garden framing -
Finding out the best option for macrocarpa sleepers:

Option 1:
200mm x 100mm by 2.1m = 20cm x 10cm x 210cm
210cm x 6 = 1260cm
$66.78 x 6 = $400.68
Removing GST: 400.68/1.15 = $348.42

Option 2:
200mm x 100mm x 4m = 20cm x 10cm x 400cm
400cm x 3 = 1200cm
$130 x 3 = $390
Removing GST: 390/1.15 = $339.13

Option one would be best for this scenario because it maximizes the area of the garden whilst only costing $9.29 more. As the primary focus is to maximize area space, this option would be better as it adds 60cm more to the timber while still being less than $350. Option one costs $348.42, and option two costs $339.13. If the price difference was larger than $9.29 I would say that option two is better as it would cost less for not a large change in timber size. But as this difference is under $10, I think it is worth it to have the extra area space as this is one of the main requirements of the garden.

Dimensions:
Maximizing area space

Side 1	Side 3	Area
1m	5m	5m²
2m	4m	8m²
3m	3m	9m²
4m	2m	8m²
5m	1m	5m²

Using this table, I have decided that each side of the garden will be 3 metres long. This area will be 9m². This also means that the garden will be in a square shape. This would look better than a rectangle and is neater.

Gardening mix -
Finding the amount and cost of gardening mix necessary:

Finding the volume of garden needed to fill:
3 x 3 x 0.15 = 1.35m³
I did this because to find the volume it is base x height x depth. I removed 5cm from the top of where it needs to fill as it needs to sit 5cm below the top edge of the garden.

Removing space for water tank -
Removing part of the gardening mix to make room for the water tank:

Cylinder -
R = 0.25
H = 0.15
Volume: $\pi r^2 h$ = π x 0.25 x 0.25 x 0.15 = 0.029m^3

Removing the volume of the bottom cylinder from the garden that needs to be filled:
1.35m³ - 0.029m³ = 1.321m³
1.321m³ = 1321L
1321/40 = 33.025
Rounded = 34
After removing the volume of the water tank from where the gardening mix needs to be filled, it means the same number of gardening mix needed.

34 x $8.83 = $300.22
Removing GST: $300.22/1.15 = $261.06

Total cost:
348.42 + 261.06 = $609.48