

CALCULATING AREAS FOR PAVING

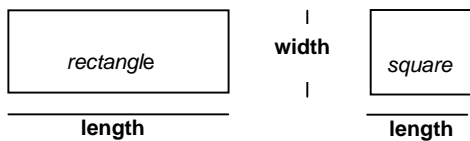
Information Sheet – compliments of Heritage Building Products

INTRODUCTION

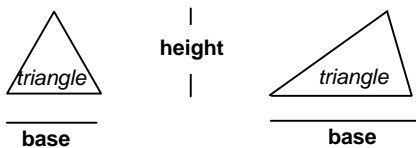
Clay paving around the house is increasingly popular with do-it yourselfers. With a little training from publications such as Clay Paving the Easy Way (video and pamphlet from the Clay Brick and Paver Institute) clay paving is a task within the reach of most home handy-persons. Unlike house bricks, which are generally sold by the thousand, clay pavers are usually sold by the square metre (usually shortened to m²).

BACK TO BASICS

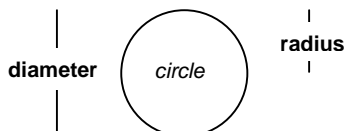
Most areas are one or other (or a combination of three basic shapes), rectangles (including squares), triangles and circles.



The area of a rectangle (or a square) = length x width
For example: an area 10 metres long and 5 metres wide = 10 x 5 metres = 50 m² (square metres).



The area of a triangle = half the width of the base x height.
For example: a triangle with a base 10 metres wide and a height of 8 metres = 5 x 8 metres = 40m²



The area of a circle = πr^2 OR multiply the circle radius by itself and multiply the result by 3.14 (The radius is half the diameter).
For example: a circle with a diameter of 5 metres (and therefore, a radius of 2.5 metres) = 2.5 x 2.5 x 3.14 = 19.6m²

PUTTING THE THEORY INTO PRACTICE

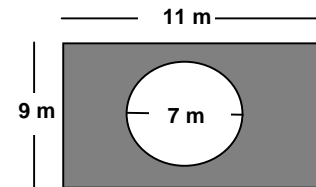
Example 1: A rectangular area with a round pool.

This is simply a rectangle with a circle missing. Measure the length and width of the area to be paved and the diameter of the pool. Use these to make two calculations.

Total area (including pool) = length x width
= 9 x 11 metres = 99 m²

Area of pool = radius x radius x 3.14
= 3.5 x 3.5 x 3.14 = 38.5 m²

Area to be paved = Total area - Area of pool
= 99 - 38.5 = 60.5m²



Example 2: As for Example 1, but with an irregular pool.

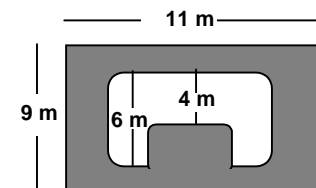
Average width of pool = (widest + narrowest) divided by 2

= (6 + 4) divided by 2 = 10 divided by 2 = 5 metres

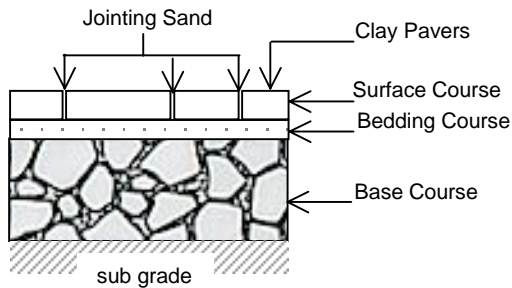
(Approximate) area of pool = length x average width
= 9 x 5 = 45 m²

Area to be paved = Total area - Area of pool
= 99 - 45 = 54m²

Note: this calculation is only approximate, allow extra pavers.



QUANTITY ESTIMATING



Surface Course 50mm pavers

Bedding Course 20mm of compacted coarse washed sand

Base Course 100mm of A-Grade 20mm fine crushed rock

▪ PAVERS

- 38 pavers per m² exactly. Allow 40 pavers per m² for any cutting necessary on site at the time of ordering.

▪ SAND

- 25mm uncompacted sand per m² = 1m³ of sand for every 40m² of paving OR
- .025m³ of sand per m² of paving.

▪ BEDDING

- 100mm of compacted rock per m² = 1m³ of compacted rock for every 10m² of paving OR
- .1m³ of compacted rock per m² of paving.
(**Note:** 2 ton of loose rock is approximately equal to 1 compacted cubic metre).

Example: A 60m² driveway

- Pavers 60m² x 40 pavers per m² = 2400 pavers
- Sand 60m² x .025 sand per m³ = 1.5m³ bedding sand
- Rock 60m² x .1 compacted rock = 6m³ rock (12 loose tons)