The following information is designed to help you assess the required depth and area size of safety surfacing required.

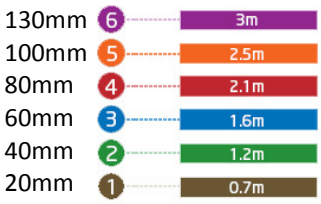
Depth of Surfacing

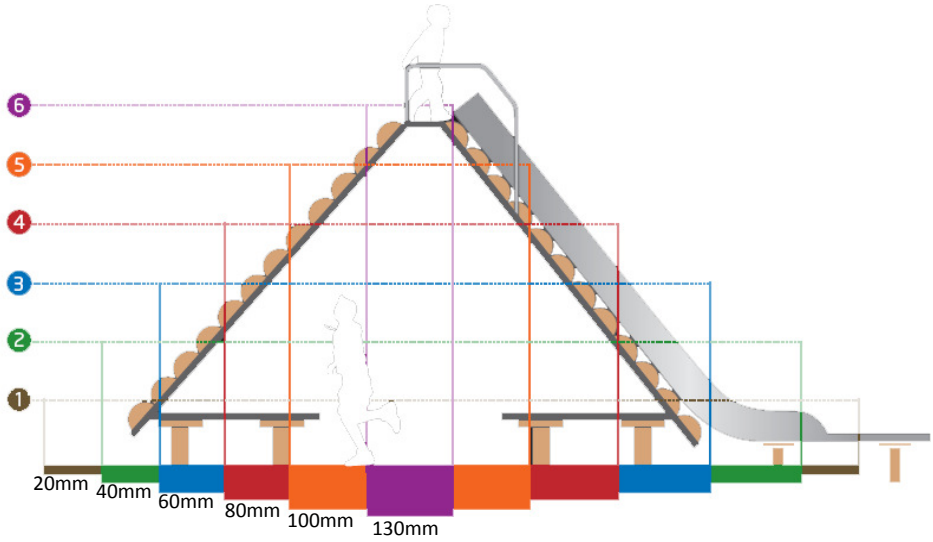
The depth of surfacing required is calculated according to the Free Fall Height (FFH) of any play equipment along with the surface's Critical Fall Height (CFH). This is the height from which it is assessed that a surface will absorb the impact of a child's fall sufficiently to reduce the risk of serious head injury.

The maximum FFH (i.e. the distance between any accessible part of play equipment intended for play and the surface underneath) should equal or not exceed the surface's CFH. We would be happy to advise of the FFH of any existing or planned play equipment, however the general principles are detailed below.

Stationery Equipment

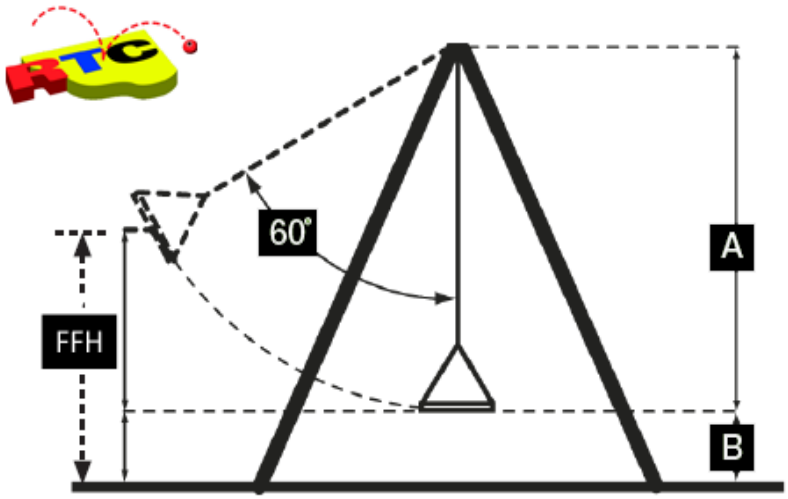
For equipment on which a child stands, the FFH is calculated from the highest point on the equipment which is intended for play, usually the platform height. For equipment from which a child hangs, the height of the hand support is used.





Swings

The FFH is calculated from the centre of the stationary seat surface at 60 degrees. To work this out divide the length of the chain by 2 then add the distance from the seat to the ground. The image below demonstrates this.



FFH = (A ÷ 2) + B

RTC Safety Surfaces have been tested according to British and European Safety Standards to the certified levels below.

Critical Fall Height (CFH)	0.7m	0.9m	1.2m	1.5m	1.6m
Thickness	20mm	30mm	40mm	50mm	60mm

Critical Fall Height (CFH)	1.85m	2.1m	2.3m	2.5m	3.0m
Thickness	70mm	80mm	90mm	100mm	130mm

Please note that if the sub-base is Type 1 MOT stone the minimum depth which can be laid is 40mm.

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Area of Surfacing

The extent of surfacing required around the play equipment is dictated by the height of any potential fall.

Stationary Equipment

For stationary equipment with a FFH of 1.5m or less, surfacing should extend at least 1.5m beyond the edge of the equipment. To calculate the surfacing distance for equipment with a FFH of over 1.5m, subtract 1.5m from the FFH and multiply the result by.667 before adding back the 1.5m. The table below demonstrates this principle.

Height of Fall (m)	Surface Distance (m)
1.5	1.50
1.6	1.56
1.7	1.63
1.8	1.70
1.9	1.76
2.0	1.83
2.1	1.90
2.2	1.96
2.3	2.03
2.4	2.10
2.5	2.16
2.6	2.23
2.7	2.30
2.8	2.37
2.9	2.43
3.0	2.50

Swings

The area of surfacing required for a swing is calculated as follows; to calculate the length of surfacing required to the front and back of the swing, multiply the length of the chain by .867 then add 1.15m. The width of surfacing required for seats no greater than 500mm width is 1.75m (i.e. .875mm each way from the seat centre)

For swings with seats wider than 500mm the difference between the seat width and 500mm must be added to the 1.75m (50% to each side of the swing centre). Please note that areas for two seats in one bay may overlap providing the distance between seats is 20% of the swing chain + 300mm.

Should you require any advice with regards to the depth or area size of surfacing required, please do not hesitate to contact us.