

Mezzanine Floor Design Guide

Mezzanine floors are a great way of increasing floor space, however a poorly designed solution could be costly and may not provide the benefits you were hoping for.

Mezzanine floors typically cost from around £120 per square metre and you'll see below things that can affect the cost.

Mezzanine floors are ideal when you want to retain an open area below the floor and store large bulky items above.



If you're planning to use shelving or racking above and below the floor then consider a two-tier (raised aisle) shelving system as this could be far more cost effective.

If you need shelving below and bulk storage above then you should consider using a 'floor over' shelving system where the shelving provides the support for the floor, this would be more economical than a normal mezzanine floor.



Design 'Top Tips'

- The most economical column spacing is around 3metres. If you need greater open space under the floor the columns can be set further apart at an increasing cost.
- The optimum height of the mezzanine floor should be 2.7m – 3m (to the top of the floor). This avoids using an expensive mid-staircase landing.
- The normal floor loading for a storage platform is 4.8kN/m² (480Kg per m²).
- The loads above are based on evenly spread loads and don't take into account the point loads that would be imposed by shelving or pallet trucks. In most cases this doesn't cause a problem however a heavy point load could punch a hole through chipboard decking – beware!
- If you're planning an open storage platform keep the size to less than 10m in each direction and follow the points above for the most economical design.
- If you're planning to lift pallets onto the storage platform then you'll need to include a pallet gate, ideally somewhere near the top of the stairs.
- Locating the mezzanine floor in the corner of your building will save on the amount of handrail that you'll need and this will reduce the cost.



Building Regulations

- Mezzanine floors require building regulations approval and the application costs around £750.00. We use independent inspectors to speed up the process to around 2 weeks and the vast majority of schemes are approved unless they fall outside the standard guidelines:



- Means of escape in the event of fire determines the maximum travel distance to a place of safety - using 1 staircase its 25metres, using 2 staircases its 45metres. You should locate the bottom of the staircase near to an existing fire exit if possible.
- If you're planning a storage platform that's larger than 10m x 10m then it's likely that you'll need two staircases.
- If the floor is more than 10m in either direction, smoke detection will be required to the lower level to alert people above.
- If the floor is more than 20m in either direction, it will require sprinklers or fire protection to the underside of the floor.
- If you are building office space on the mezzanine floor or if you have people working permanently of the floor then fire protection will be required.



Rateable Value

The mezzanine floor should be free standing and not be connected to the walls of the building; if this is the case then the building's rateable value should not be affected.

Disabled access (Part M building regs)

- The type of staircase required will depend on the use of the mezzanine floor and the provision of reasonable access.
- 'Part M' requires wider stair treads, lower steps, infilled risers and a mid landing depending on the height.
- If the storage platform is being used for the storage of heavy and bulky items that are handled manually it could be unreasonable to expect people with disabilities to carry out this work and if this is the case a Part M staircase may not be required. This would be determined by an access statement relating to your type of business.

If you'd like further information or a free site visit to discuss your requirements please call us – 01993 779494