# FS07: Floor Insulation

**About**

* Floors are either usually solid or suspended. Suspended floors are where finished floorboards are laid over joists (beams that run underneath the floorboards) which are raised from the ground. These can be insulated either from below (if there is a basement) or above. Solid concrete floors can be insulated by adding a layer of rigid insulation board on top. The carpet or flooring can then be re-laid.

**Benefits**

* The insulation maintains your home at a more consistent temperature; making your home feel warmer in the winter and cooler in the summer
* Pay less on your heating bills

**Key Considerations**

To install floor insulation, you may need to work with other flat owners; for advice and information on how to do this, please see our Guide [LINK].

*Suspended floor insulation*

* Repair work needed: Any existing damp issues should be dealt with before installing insulation.
* Materials: Either rigid insulation boards held in place by battens or matting (or blanket insulation) held in place by nets can be used.
* Ventilation: Care should be taken to ensure that air bricks are not blocked when installing insulation as this can result in insufficient ventilation leading to damp issues.
* Permissions: While planning permission is not usually required, the insulation installed may be required to meet building regulations. Your installer should know about this but if in doubt, check this with your local authority.
* Installation process: Insulating a floor can either be done from below if there is access from a basement or cellar, or from above by removing the floorboards. Insulating from below is easier and therefore advisable. In both cases, insulation is added between the joists either as rigid insulation boards held in place by battens or as matting held in place by nets. If the insulation is added from above, the battens or nets will need to be in place first.

*Solid floor insulation*

* Permissions: Planning permission is not usually required, however the insulation installed may be required to meet building regulations. Your installer should know about this but if in doubt, check this with your local authority.
* Remedial work: Since the floor level will be raised by adding the insulation board, door openings, stairs and other fixtures will need to be altered which will incur an additional cost.
* Installation process: Installation will require the carpet or flooring to be lifted, adding an insulating layer and re-laying the flooring. This can be disruptive as rooms will need to be cleared for the carpet or flooring to be lifted. It is highly recommended to also install a damp proof membrane layer as this will help to prevent damp issues.

**Further Information**

* Case studies:
	+ [Perthshire](http://www.retrofitscotland.org/case-studies/annat-road-perthshire/?filters=1477) (UK)
	+ [Dumbarton](http://www.retrofitscotland.org/case-studies/merkins-avenue-dumbarton/?filters=1491) (UK)
* Useful information:
	+ [National Insulation Association](https://www.nia-uk.org/) (NIA): Trade Association with list of approved installers
	+ The [Energy Saving Trust:](http://www.energysavingtrust.org.uk/home-insulation/floor) More information on floor insulation.