



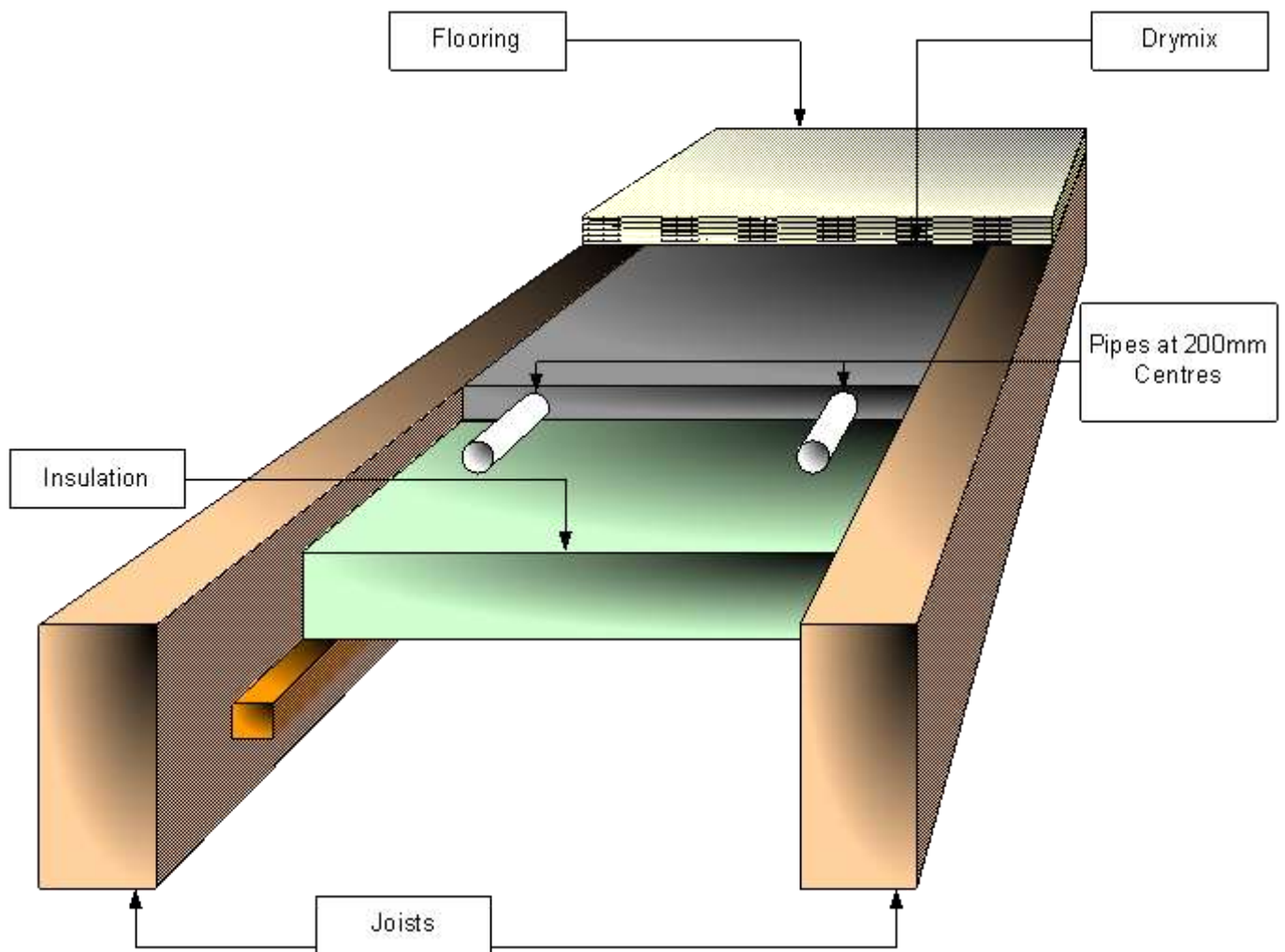
# **FLOOR CONSTRUCTIONS**

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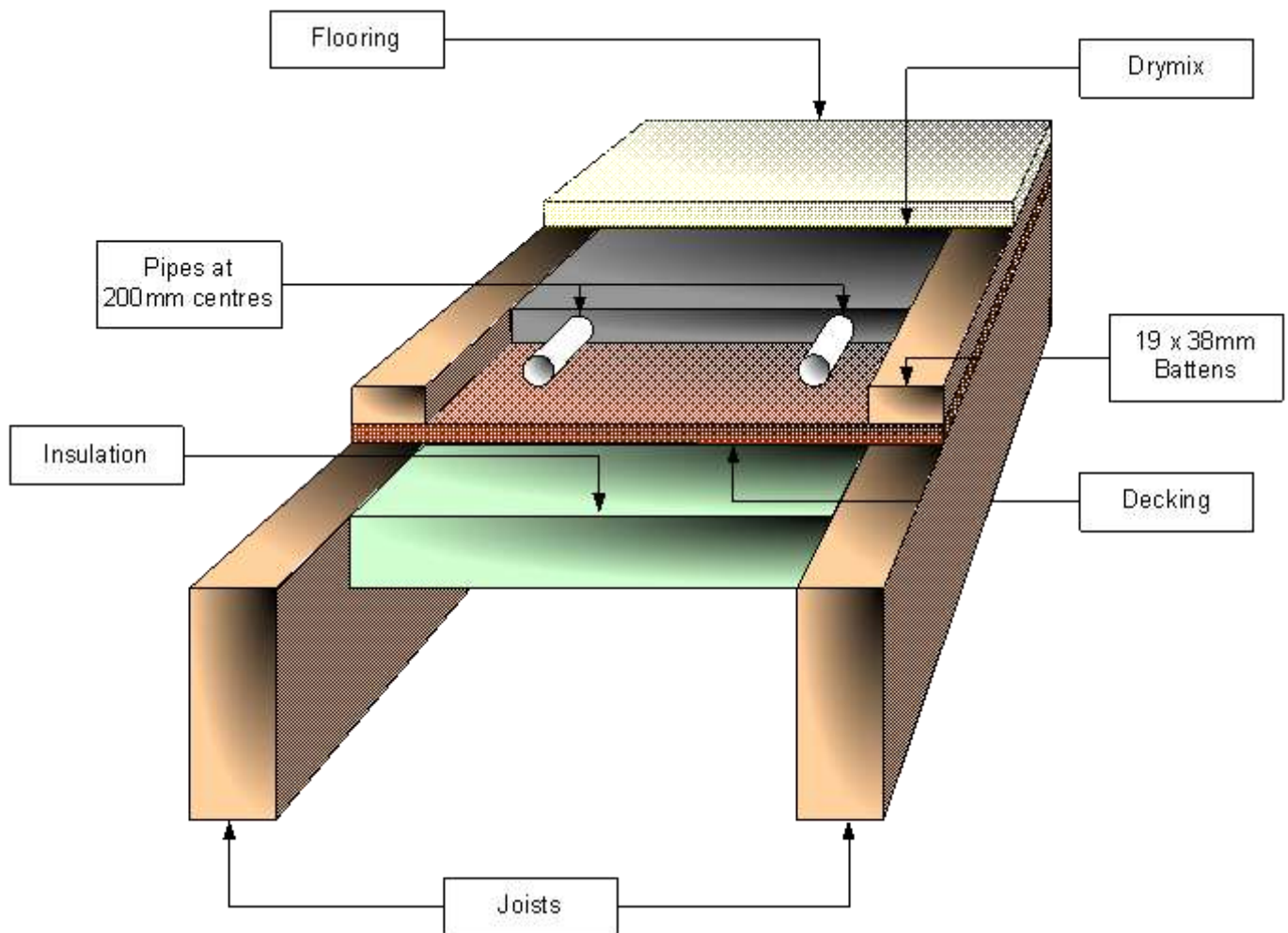
**E-mail: [info@underfloorheatingsystems.co.uk](mailto:info@underfloorheatingsystems.co.uk)  
Website: [www.underfloorheatingsystems.co.uk](http://www.underfloorheatingsystems.co.uk)**

## 1. Floor construction: Timber floor - between joists.



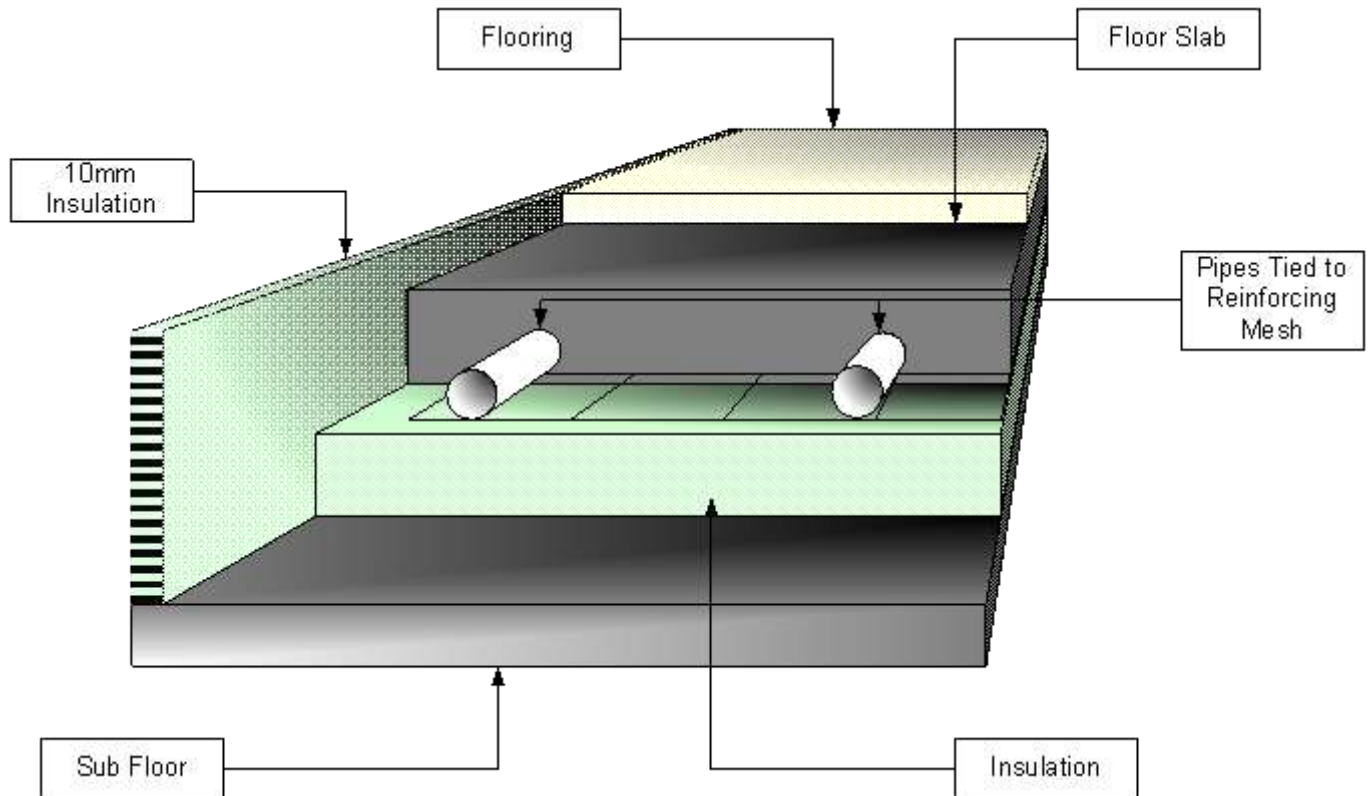
- 1) Does not increase floor height but joist notches are required for pipe to pass from bay to bay.
- 2) Insulation, high density type ('Xtratherm', 'Recicel', Celotex', 'Kingspan' etc.), minimum 50mm, (refer to building regulations).
- 3) Joist centres 400mm, pipes clipped at 200mm centres using plastic pipe staples.
- 4) Drymix, 8:1 damp sand/cement 'biscuit' mix, 20-25mm thick.
- 5) The drymix is optional for upper floors but recommended as it helps to evenly dissipate the heat through the floor and reduces the required water temperature, (refer to Architect to check floor loading).

## 2. Floor construction: Timber floor - above joists.



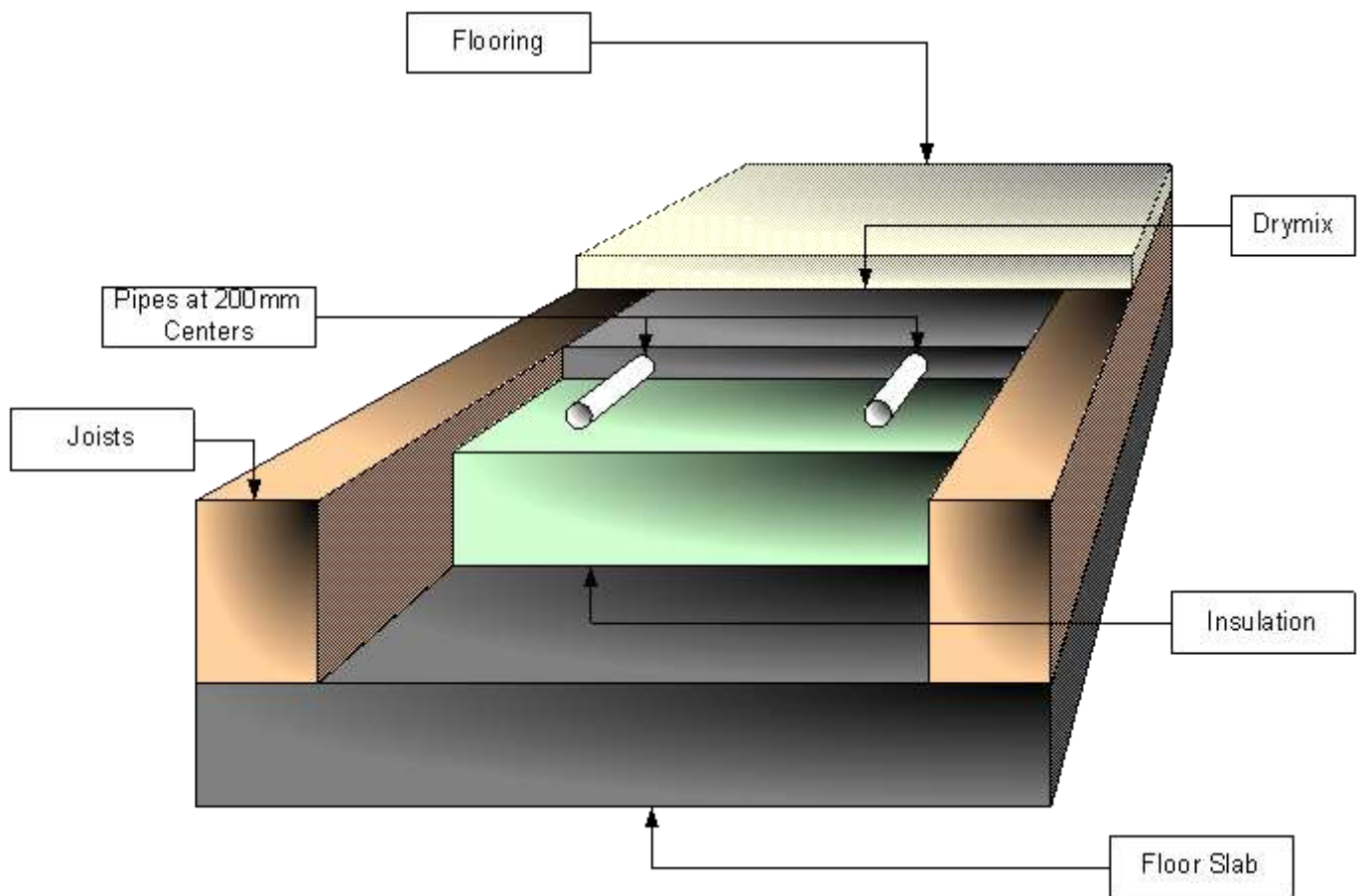
- 1) Increases floor height but joist notches are not required for pipe to pass from bay to bay.
- 2) Insulation is mandatory when used on the ground floor or above unheated spaces, minimum 50mm high density type ('Xtratherm', 'Recicel', 'Celotex', 'Kingspan' etc.), (refer to building regulations).
- 3) Joist centres, 400 or 600mm, pipes clipped at 200mm centres using nail type pipe clips.
- 4) Drymix, 8:1 damp sand / cement 'biscuit' mix.
- 5) The drymix is optional on upper floors but recommended as it helps to evenly dissipate the heat through the floor and reduces the required water temperature, (refer to Architect to check floor loading).

### 3. Floor construction: Concrete floor.



- 1) Sub floor can be either beam & block or concrete slab.
- 2) Insulation minimum 50mm polyurethane, e.g. 'Xtratherm', 'Recticel', 'Kingspan', 'Celotex' (refer to building regulations). Pipe clipped to insulation.
- 3) If using polystyrene eg. 'Jablite', minimum 80mm, a lightweight reinforcing mesh will be required to provide a fixing for the pipe, using pipe ties.
- 4) Edge insulation 10mm polyurethane.
- 5) Floor slab, 65mm minimum, sand / cement (fibre reinforced recommended) or pumped anhydrite screed (minimum 50mm).
- 6) Refer to building regulations for position of damp proof membrane.

#### 4. Floor construction: Timber floor on concrete.



- 1) Insulation minimum 30mm polyurethane ('Xtratherm', 'Recicel', 'Kingspan', 'Celotex' etc) (refer to building regulations).
- 2) Polystyrene is not suitable.
- 3) Joist centres, 400 or 600mm, pipes clipped at 200mm centres using plastic pipe staples.
- 4) Joist height required to be 25mm greater than insulation.
- 5) Drymix, 8:1 damp sand/cement 'biscuit' mix.