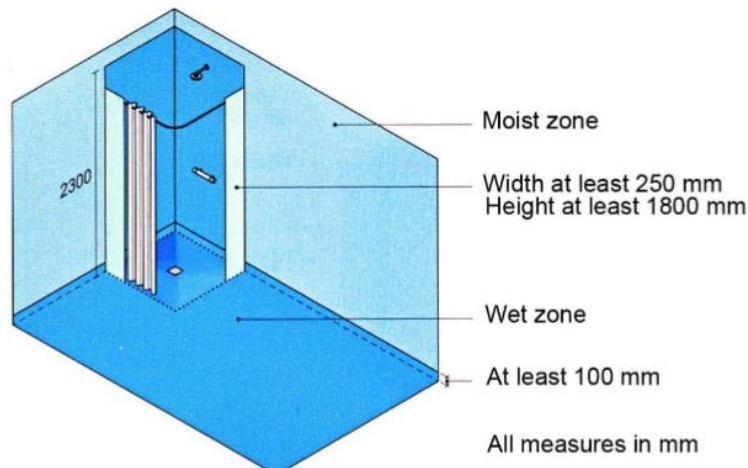


## Wet room analysis

### Zoning in the wet rooms:



**Wet zone** – shower area and whole floor area + 100 mm up the wall

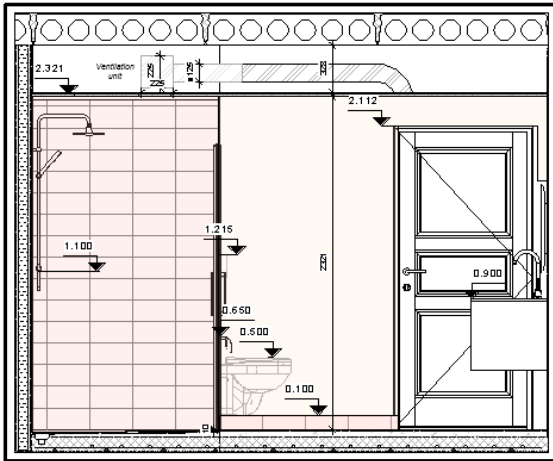
**Moist zone** – surrounding walls outside of the shower area

**L** *Class L (Light):* Wet rooms with low water- and moisture load, that is few daily baths and good airing after use. Low water- and moisture load are found e.g. in wet rooms in single-family houses, summer cottages for personal use and buildings with limited application.

**M** *Class M (Medium):* Wet rooms with medium water- and moisture load, that is several daily baths and/or faulty airing. Averagely water- and moisture load are e.g. often found in dense-low homes, flats, hotels, summer cottages for rental and bathrooms to smaller jobs.

**H** *Class H (High):* Wet rooms with high water- and moisture load, or where there is greater mechanical loads of the wet room's surfaces and constructions than normally in homes, e.g. many daily baths, periods with water on the floor, direct on-spraying of water on surfaces or use of dinner wagons and mobile machines. High water- and moisture load are found e.g. in shared bathrooms in sports centers, restoration kitchens, great kitchens, production rooms in the food industry, indoor pool area in single-family houses and summer cottages, see section 2.4, *Heavily loaded wet rooms.*

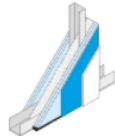
Bathroom analysis of a 2nd floor bathroom in two-bedroom apartment.



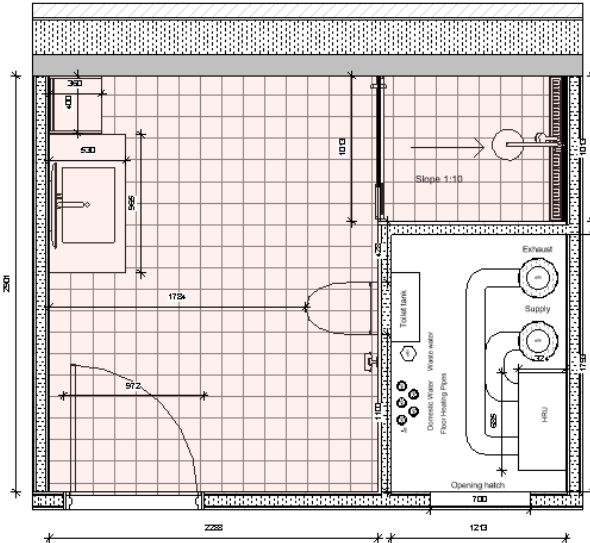
1:20

- Gypsum wall - 95 mm
- Gypsum wall - 120 mm
- Ceramic floor tiles - 150 x 150 mm
- Ceramic wall tiles - 300 x 150 mm

Area - 7.66 m<sup>2</sup>  
 Ceiling height - 2321 mm  
 Suspended ceiling construction - H. 358 mm



Wall structure  
 2 x Solid Wet Board  
 Waterproof. membrane  
 Tiles



1:20



Bring ideas to life  
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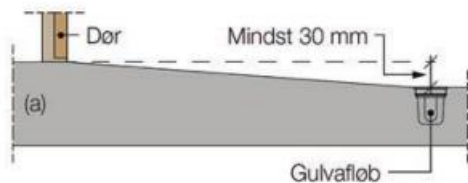
PROJECT: Multistory Building	DATE: 09/14/23	STAGE: Project Proposal
SUBJECT: Bathroom analysis	SCALE: As indicated	
DRAWN BY: Marina Hedegaard	CLASS: AH41-23S	I17_F06_H4_N01

**Floor construction:**

- Inorganic sub floor on top of heavy slab constructions ( concrete ).
- LIP waterproofing system
- Elastic joints at the corners between tiles connections

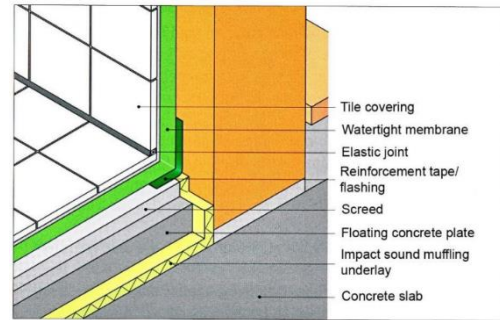
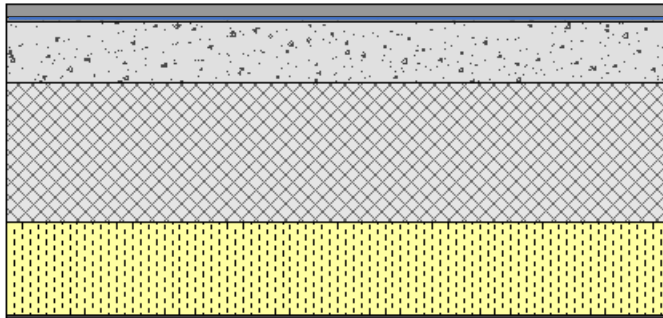
The Building regulations demands that water on floors in wet rooms has to be drained off for floor drains. Floors therefore have to be carried out with slope against floor drains. (SBI 252)

Floor level from door to top of floor drain – 30 mm difference  
 As shown:



SBI 252

Concrete height at floor drain – 60 mm



Actual floor construction:

SBI 252

On top of hollow core deck elements (build up):

3 mm sound insulating matt

100 mm Thermotec

90 mm in-situ concrete

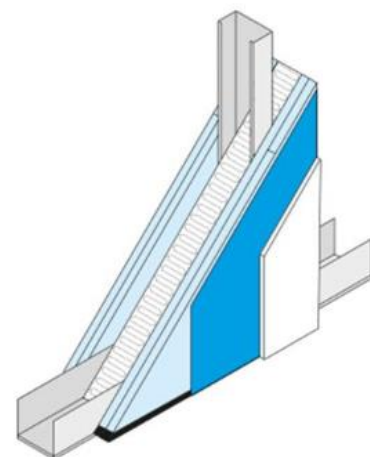
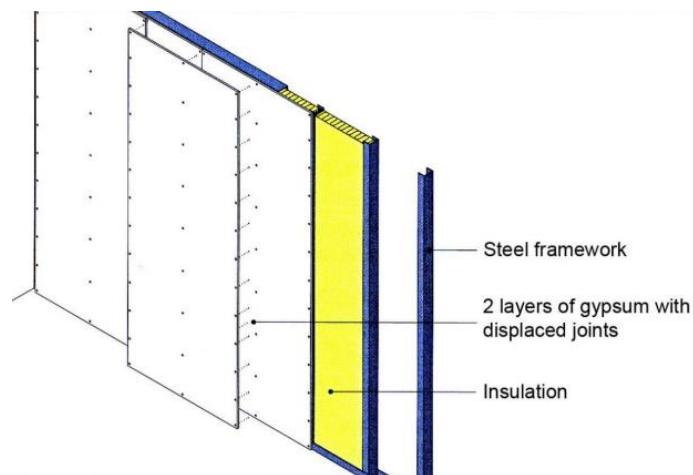
40 mm screed

2 mm waterproofing membrane (+ elastic joints at corners)

9 mm tiles

### Wall analysis used in wet room:

The walls in the wet rooms in the building have light-weight construction of steel frame and 2 plates on each side – on the side towards another room that is not a wet room – used gypsum, and on the side towards the wet room – special plate that is moisture resistant:



### Wall construction:

Steel profile 70 mm

2 x Solid Wet Board (12,5 mm each) on the side of the wet room

Waterproofing membrane – LIP system

Tiles

Solid Wet boards are MK-approved, made of fiberglass-reinforced plasterboard with an impregnated plaster core.

Water tightening	MK-approved tile system with membrane	PVC	At least 0,20 mm PE-foil or 1 mm wet room membrane as underlay for plate covering or boards	Tile system without membrane /paint treatment. The demands to achieve MK-approval have to be fulfilled and be documented <sup>1)</sup>	None, that is a water proof surface of tile covering/paint treatment or the like <sup>2)</sup>
Wall construction					
Concrete in situ	LMH	LMH	LMH	LMH <sup>5)</sup>	LMH
Concrete/light concrete elements/blocks	LMH	LMH	LMH	LMH <sup>5)</sup>	LMH
Bricks etc.	LMH	LMH <sup>6)</sup>	LMH	LMH <sup>5)</sup>	LMH
Stud wall with 'water-tight plates' <sup>2)</sup>	LMH	LMH	LMH	LMH	LMH
Stud wall with calcium-Silicate plates	LMH	LMH	LMH	LMH	LMH
Stud wall with cement-based plates	LMH	LMH	LMH	LMH	LMH
Stud wall with wetroom plasterboard	LMH	LMH	LMH	LMH	LMH
Stud wall with fiber-plasterboard	LMH	LMH	LMH	LMH	LMH

### Ceiling analysis used in wet room:

Ceilings in wet rooms normally have to be carried out airtight in order to prevent up-flow of hot, moist room air. This can for example be gained by using a plate covering that has been connected air tight against the walls. Damp-stopping layers mustn't be placed on ceilings between two wet rooms, because a damp stopping layer can collect water and thus delay an observation of leaks in overlying wet room floors. (SBI 252)

### Materials used in the project:

- Suspended ceiling system (steel) from KNAUF
- 2 x gypsum boards
- Sealant along the corners

