

Subsequently the most important planning aspects are listed. Please consider the mentioned planning aspects during the planning phase already and bear the desired vegetation and usage of the green roof in mind; this determines which system solution is appropriate.

Additionally national regulations, norms and guidelines are to be considered.

- Roof membrane and root protection**
 - Roof membrane according to DIN EN 18531 and DIN EN 18195, or national regulations
 - Root proof roof membrane or root protection membrane
 - Root proof according to FLL guidelines or DIN EN 13948
 - Appropriate connections and connection heights
 - Root protection for the whole roof area

- Additional area load because of roof greening and roof usage**
 - On top of snow load
 - Additional load because of roof greening
 - Additional load for public roofs and accessible roofs

- Roof pitch**
 - A roof pitch of approximately 2% is desired for extensive green roofs. Roofs without roof pitch and water ponding require appropriate counter measures (i.e. drainage)
 - Intensive green roofs and extensive Retention Roofs favor roofs without roof pitch, which retain more water. Increased requirements for roof membrane and drainage apply
 - Starting at 15° roof pitch Anti-Slip systems have to be used in order to avoid slippage
 - Public roofs require a minimum roof pitch of 2-3 %

- Wind up-lift and wind erosion protection**
 - Especially important for exposed or roofs on tall buildings
 - Wind up-lift protection of the roof membrane and insulation of the inverted roof
 - Wind erosion protection of the green roof
 - Possibly increased loads and protection measures are to be considered

- Fire safety regulations**
 - Green roofs are so called hard roofs, as long as certain requirements are fulfilled (refer to FLL guidelines)
 - Consider local fire regulations

- Drainage**
 - Sufficient number of roof outlets
 - Appropriately dimensioned drainage layer considering roof pitch and drainage form
 - Usage of Inspection Chambers
 - Special requirements for siphonic drainage

- Used system solution (green roof / public roof)**
 - Depends on desired vegetation, usage and master plan specifications

- Water supply**
 - For permanent irrigation of intensive green roofs
 - For initial irrigation of extensive green roofs
 - Appropriate output
 - Backflow preventer
 - Possibly in combination with cisterns
 - Winter protection measures are to be considered

- Work safety/Fall Protection**
 - Required starting at 2 m fall height
 - Responsibility of the building owner/designer
 - Construction and usage phase (scaffolding during construction phase, cable-guided fall protection for personal protective equipment, railings for escape routes and roof terraces)
 - Usage of fall protection secured by superimposed load
 - Take notice of local construction regulations

- Roof access**
 - For care and maintenance work (stairwells, ladders, exits)

- Coordination with other trades**
 - Possibly combination photovoltaic/green roof
 - Possibly combination of green roof and rain water usage

- Recommendations for creating system specifications**
 - Separate the trades for roof membrane and green roof
 - Describe the construction project as precisely as possible (number of roof areas and sizes, heights and accessibility) including the desired vegetation and form of usage
 - Integration of the follow-up and developmental care