

Furthermore, green roofs provide significant acoustic insulation through the absorption, reflection and deflection of noise. The substrate of a green roof tends to block noise in the lower frequency range while plants block noise.

Green roofs improve the appearance of the cityscape and encourage biodiversity. Green roof may also serve as outdoor social area (as shown in fig 304.03(1)).

## APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(3) in Section One - Administration for detailed applicability levels.

## IMPLEMENTATION

Installing a green roof requires special attention during the design, installation and subsequent maintenance phases. Green roof design must consider structural implications, as they are heavier than conventional roofing systems. Waterproof membrane or layers must be installed between the roof and the soil bed of the green roof to prevent surface runoff, or leaks, from damaging the building elements. A tough and impermeable layer is required to prevent the plant roots from damaging the supporting structure.

The project site illustrated below (fig. 304.03(2)) includes roof elements that incorporate green roofs.

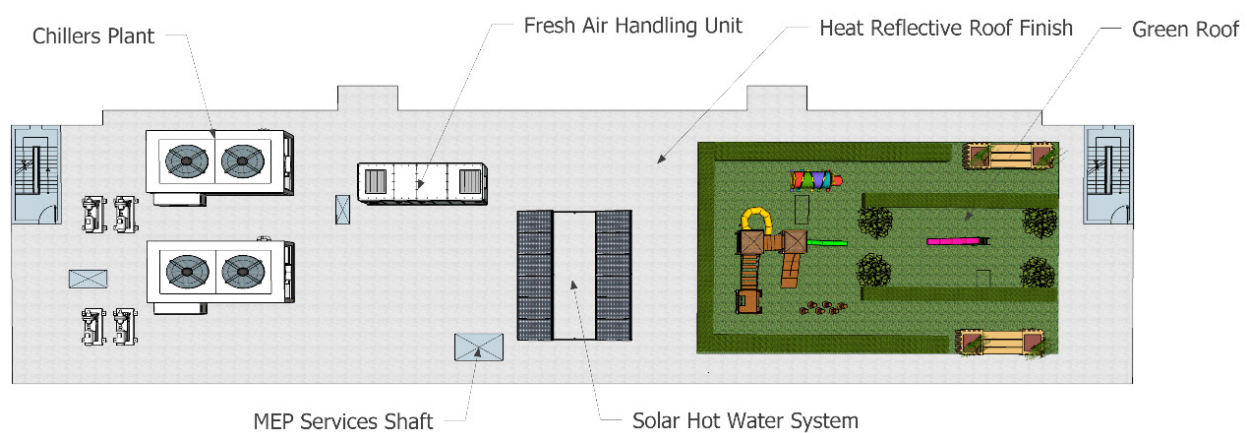


Fig 304.03(2): Illustration for Green Roof

Proper maintenance would be required to keep the plants healthy and the structure in good condition.

Water consumption is a significant consideration when using green roofs, especially in Dubai. The use of potable water needs to be kept to a minimum or even eliminated. Properly recycled gray water or water recovered from machinery condensate can be used effectively for green roof irrigation. Irrigation must use drip or sub-surface systems or use of non-potable water. For plant types suitable for Dubai's climate, refer to *Regulation 302.01: Local Species*.

Note: If the green roof provides 30% of the total surface area of the building, it will be exempted from the requirements of *Regulation 304.01*.