IMPLEMENTATION

100% of the landscaping area of a building site (including green roofs) should be irrigated using non-potable water or by use of drip or subsoil water delivery systems.

Project teams should use efficient irrigation techniques to reduce the amount of water for irrigation (fig. 601.04(1)). Buried irrigation systems are also very effective in delivering low levels of water to plant roots.

Several irrigation techniques are available that effectively reduce the irrigation water use. Micro-irrigation systems like drip irrigation, soaker hoses and micro sprayers are very efficient in reducing water use and at the same time deliver required amount of water directly at the roots of the plants. Sprinklers can cover large areas for irrigation, however less efficient than drip irrigation.

Fig. 601.04(1): Drip Irrigation System

Alternative forms of irrigations, if used, must not use potable water source. Grey-water or condensate water or Treated Sewage Effluent (TSE) can be considered for irrigation. The use of treated greywater for irrigation is addressed in *Regulation 603.01 Wastewater Reuse.* TSE water for irrigation must be from the sources approved by Dubai Municipality.

To reduce irrigation water demand and consumption, following recommendations for irrigation planning could be considered:

- Planting native and adaptive species would create a self-sustaining landscape, which would require only minimal water, less fertilisers and pesticides.
- Reducing or eliminating turf grass will decrease the irrigation demand. If turf is preferred, use low maintenance and drought tolerant grass.
- Plants can be located and grouped according to their water requirements. This allows for an irrigation schedule to apply the appropriate amount of water to each landscaped area. Trees, shrubs, groundcover, perennials and annuals that naturally grow together and use about the same amount of water should be grouped together.
- Automatic irrigation systems' watering time and schedule should be adjusted throughout the year based on changes in weather or seasons. Routine maintenance of irrigation system should be carried to ensure systems running efficiently.
- A sub-meter may be installed to monitor the water consumption for irrigation application. This would aid in identifying and rectifying any irrigation overuse.
- Night-time irrigation is more efficient, as evaporation is much lower at night.

If irrigation networks get connected to a potable water supply, possibility of any backflow from the irrigated water getting drawn back into the potable water system must be avoided.