Chapter 3

Water sources for irrigated turf and landscape sites

Water for irrigation

Securing a water source to supply irrigated sites requires detailed assessment of both the requirements and characteristics of the site and the suitability of the water. A long-term solution requires a match between the properties of the water source and the specific needs and characteristics of the site.

The site generally has requirements for:

- adequate water volume
- appropriate water supply conditions
- water quality suitable for sustainable use
- security of water supply.

The extraction of water from a source will have some impact on the condition or state of the source. These may be reduced resources, changed water properties or there may be some broader environmental impact. Each potential impact, which occurs as a result of the extraction of water, needs to be considered as part of the overall evaluation.

There are numerous potential sources of water for urban irrigation:

- potable (suitable for human consumption) mains supplies (reticulated systems)
- recycled or reclaimed water (treated effluent)
- stormwater (runoff from ground, paved areas roads, car parks, etc.)
- rivers, creeks/water courses
- groundwater
- rainwater (roof-harvested rainfall)
- greywater (bathroom, shower, in-house taps)
- sewer mining (water extracted from sewer main and treated locally)
- industrial water (water previously used as part of production or other process).

The particular characteristics of each water source needs to be considered when seeking a water source for irrigation. The following should be considered:

- volume available
- water quality – chemical, physical and biological
- water treatment requirements (if any)
- flow rate
- supply pressure
- cost
- availability – timing and duration
- reliability of supply
- conditions of use of water