4.1.3 LANDFORMS

Where site planning permits, runoff from impervious surfaces such as roofs, roads and car parks, and overland flows from turf and garden bed areas may be captured and allowed to infiltrate to subsoils by reshaping existing landforms.

Swales, contour banks, soaks, percolation pits and basins, rain gardens, bioretention filters and other devices are all appropriate landforms for water conservation and groundwater recharge. Refer to Council’s Water Sensitive Urban Design Guidelines for the design of these systems. The terracing of gardens to reduce runoff is also an acceptable solution.

4.2 PLANTING DESIGN

Use plants adapted to the site so that direct rainfall supplies all or most of their water needs. It is recommended that suitably qualified and experienced horticulturists, landscape designers or landscape architects should prepare all planting documentation for tendering and construction.

4.2.1 CONSERVE EXISTING VEGETATION

Because they have developed root systems that use existing ground waters and will require negligible extra watering, where appropriate, established trees, shrubs and groundcovers in good condition should be retained. In general, existing vegetation in good condition (except species identified on Council’s weed list) must not be removed or replaced. However, subject to the projects design objectives, existing vegetation could be supplemented by new planting.
4.2.2 HYDRO-ZONING

Hydro-zones are areas within a site of differing soil moisture, evaporation rate and exposure to the local weather conditions. They are often described as wet, damp, dry or arid. Choose plants that are best suited to these zones, as their water requirements are more likely to be met without the need for an irrigation system.

Appendix 2 provides further guidance on determining site hydro-zones; Figure 4 provides examples of hydro-zones found in Brisbane. It is recommended that a person with a sound knowledge of horticulture and experienced in the selection of plants suitable for local conditions is engaged to carry out this work.

4.2.3 PERCENTAGE OF WATERING NEEDS PROVIDED BY DIRECT RAINFALL

To comply with this guideline, average rainfall must provide more than 50% of the plants’ water needs; otherwise, the planting design must be revised. If rainfall infiltration provides between 50% and 100% of the plants’ water needs, an irrigation system is required (go to Section 4.3). If 100% of the plants’ water needs can be met by rainfall alone, proceed to Section 4.4.

For podium landscaping, direct rainfall infiltration may supply less than 50% provided 75% or more can be met via sources other than potable water.

Appendix 2 provides a method for estimating these percentages.

4.3 IRRIGATION

Use a professionally designed storage and irrigation system to supply harvested stormwater to garden beds and turfed areas.

4.3.1 SITE WATER HARVEST CAPACITY

If an irrigation system is required (refer to Section 4.3.3), determine the quantities of water that can be harvested from roofs, roads, car parks and other impermeable surfaces. Water harvested from roofs must be stored in above ground rainwater tanks or below ground cisterns. Due to public health issues, water harvested from roads, car parks and hard-scape must divert directly to turf and garden areas and must not be stored for later use (unless a treatment system is in place).

Harvested stormwater must supply 50% or more of the plant’s remaining water needs. Refer to Appendix 3 for further guidance.

For podium landscaping, harvested stormwater may supply less than 50%, provided a total of 75% or more can be met via sources other than potable water.