



HUME CITY COUNCIL

LANDSCAPE GUIDELINES

Integrated water management

Integrated Water Management (IWM) is a collaborative planning approach which minimises storm water runoff, maximises rainwater infiltration and reuse, and includes waterway protection, storm water treatment and harvesting.

Water Sensitive Urban Design (WSUD) is incorporated in IWM, and is an approach that achieves treatment of stormwater to best practice, whilst providing assets that are attractive, contribute to habitat and environmental sustainability whilst providing amenity and recreational assets for the community.

IWM includes:

- Rainwater captures into tanks for garden watering and toilet use
- Passive irrigation of Street trees and landscape areas
- Permeable paving to maximise rainwater infiltration into the ground
- Capturing and treating stormwater for reuse purposes eg: sportsfield irrigation, agriculture etc
- Retention and treatment of stormwater in dedicated facilities such as retarding basins, sediment ponds, wetlands and raingardens/ bioretention systems

Acceptable IWM and WSUD assets include:

- Wetland, Retarding basins, Sediment ponds
- Other methods that collect litter and sediments to prevent them entering the stormwater systems
- Raingardens and Bioretention swales and systems
- Buffer strips to waterway reserves and infiltration beds
- Kerb inlets
- Tree pits

Design requirements

- Where possible, retain natural landform and drainage paths, existing vegetation and rock formations to ensure natural hydrology of a site remains stable
- On-site infiltration of water should be maximised by limiting the impervious surfaces
- Innovative, efficient water reuse systems are encouraged
- Outfall drains are to be constructed to slow flows and disguise pipe outlets, so that the waterway retains as natural an appearance as possible
- Wetland creation is to provide recreational opportunities, promote landscape amenity and habitat links as well as manage stormwater
- Wetlands must be designed to address public safety as well as comply with current Melbourne Water guidelines
- Wetlands must have nominated maintenance access points with industrial strength vehicle crossings
- All wetland batters steeper than or equal to 1:3 grade are to be planted
- No structures are to protrude over water
- Where appropriate, islands should be incorporated into the design of wetlands to provide refuge and improve habitat values
- Seating and paths are to be located above the 1:10 flood level, and recreational structures such as shelters and playgrounds, are not to be located within the 1:100 year flood level
- Rain gardens and Bioretention systems/swales may only be located within reserves, drainage easements and carparks
- Council supports the use of buffer strips to the edges of reserves to filter storm water and facilitate passive irrigation

- Kerb inlets can be used to facilitate passive irrigation of street trees to meet IWM targets and Council's Urban Forest Strategy tree canopy tree target of 20%
- Kerb inlets are to be designed as part of the civil construction plans. Draft streetscape plans are required early in the process to inform civil design.
- The use of tree pits in conjunction with structural soil is encouraged in town centres to maximise tree planting and shade, while providing large, paved areas for outdoor dining and active transport
- Where surface drainage is used, design is to take into account the prevailing soil conditions, including the properties of Hume's clay soil profile. Appropriately shaped and sized swales or dry creek beds are to be utilised to capture and transport water to an approved point of discharge.

Additional requirements for developers

- A safety audit provided by a suitably qualified wetland design consultant is to be provided prior to design approval and prior to hand over to Council

References

Environment Protection Authority guidelines for erosion control

Hume City Council, Urban Forest Strategy

Hume City Council, Integrated Water Management Plan

Hume Industrial Stormwater Code Of Practice

Melbourne Water, Constructed Wetlands Guidelines

Melbourne Water, Constructed Waterways in Urban Developments

Melbourne Water, Guidelines for Stormwater Management

Melbourne Water, Standard for outfall

Urban Storm Water Best Practice Environmental Management Guidelines, CSIRO

Standard Drawing:

- Refer to Council standard drawings for Kerb inlets and Tree pits

